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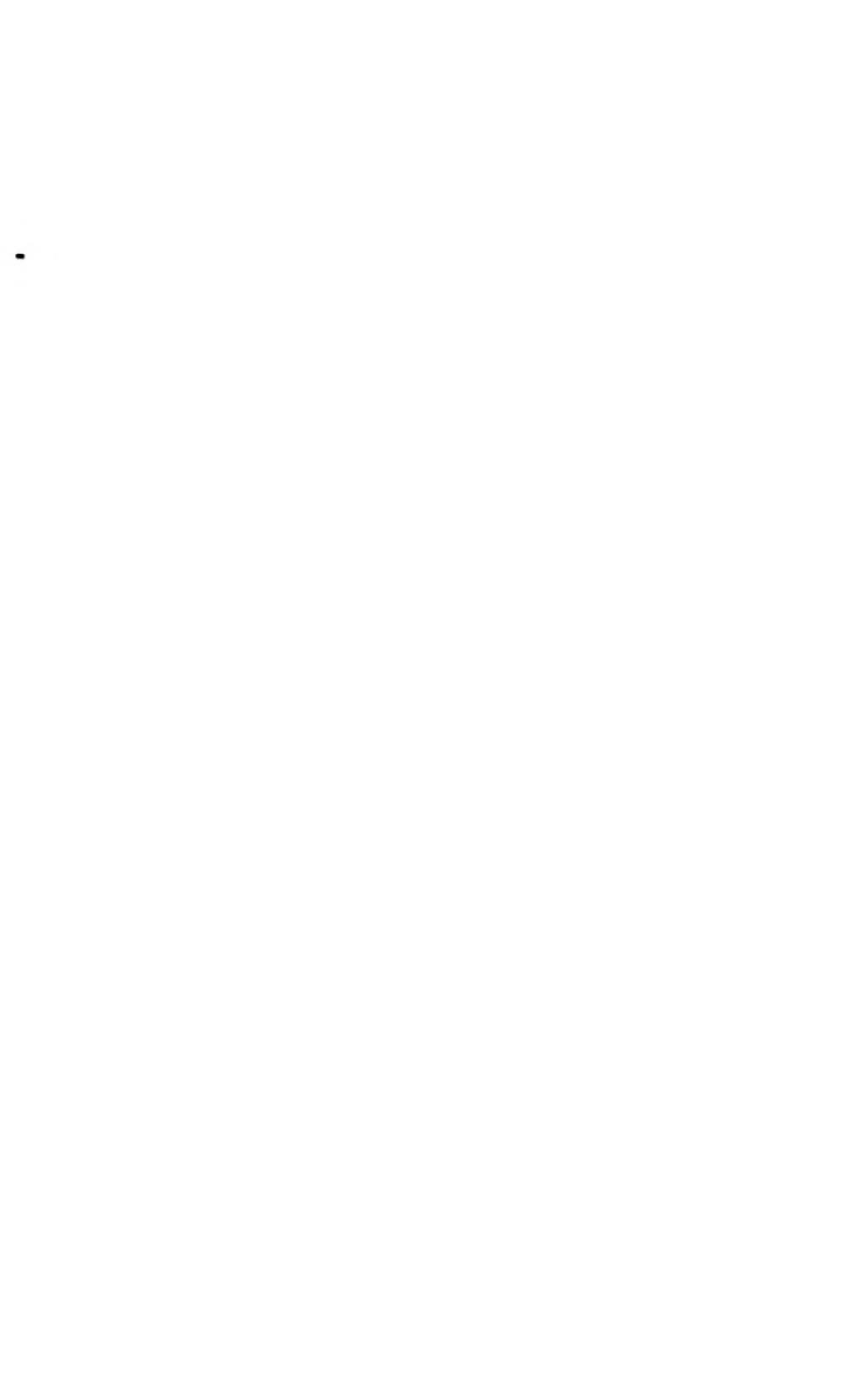
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THE HISTORIC HUDSON RIVER

Looking northward from West Point

TALES AND REMINISCENCES OF THE STIRRING
TIMES THAT FOLLOWED THE INTRODUCTION
OF STEAM NAVIGATION

BY
DAVID LEAR BUCKMAN

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FOREWORD

THE approaching dual celebration of the Ter-Centennial of Henry Hudson's discovery of the great river bearing his name, and the Centennial of Robert Fulton's successful application of steam to navigation on that same stream, would seem to warrant the appearance of this little volume. Aside from this fact, the subject is one that calls up many interesting reminiscences on topics that have not heretofore been grouped along the lines the author has endeavored to follow.

Most of the old river men best calculated to furnish both information and advice in the preparation of a book such as this, have gone on their last long trip, while those who remain are comparatively few and widely scattered. There are possibly still many old steamboat men who have, stored away in ancient scrap-books and records, highly interesting data that should be brought together in some permanent form—and which the writer would be pleased to incorporate in some future edition—for the benefit of those who may seek to learn something more of the unfolding of one of the most glorious and important periods in the country's development. To those who have helped the

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author in any way—and there have been many—grateful acknowledgment is hereby given. Many books have aided in furnishing the data that will be found in the following pages, among the number being “Reigart’s Biography,” J. H. Morrison’s “History of American Steam Navigation” and “Munsell’s Annals.” Special thanks are due Mr. Samuel Ward Stanton, editor of the “Nautical Gazette,” for his permission to use the interesting table of old boats, prepared by him, and several illustrations that have appeared in that publication.

The fact that the author’s father followed the river for many years, handling the wheel of the old *North America* on her sprints to cut down the time, and his great-uncle commanded the good sloop *Robert Burns* long before that, carrying both freight and passengers, has added no small degree of interest to the labor involved in the preparation of “Old Steamboat Days on the Hudson.”

To the memory of his father in particular, the author would inscribe whatever of interest and value may be found in this tribute to the men of the early days, who made possible the important chapter of the country’s history that deals with steam navigation on the Hudson River.

D. L. B.

SEPTEMBER 30, 1907.

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**OLD STEAMBOAT DAYS
ON THE HUDSON RIVER**

OLD STEAMBOAT DAYS

CHAPTER I

ROBERT FULTON

ROBERT FULTON will always be known as the inventor of the steamboat. It was a great day in the world's work, when, after years of study, experiment and disappointment, he traveled from New York to Albany on his little steamboat the *Clermont*. That was in August, 1807, just one hundred years ago.

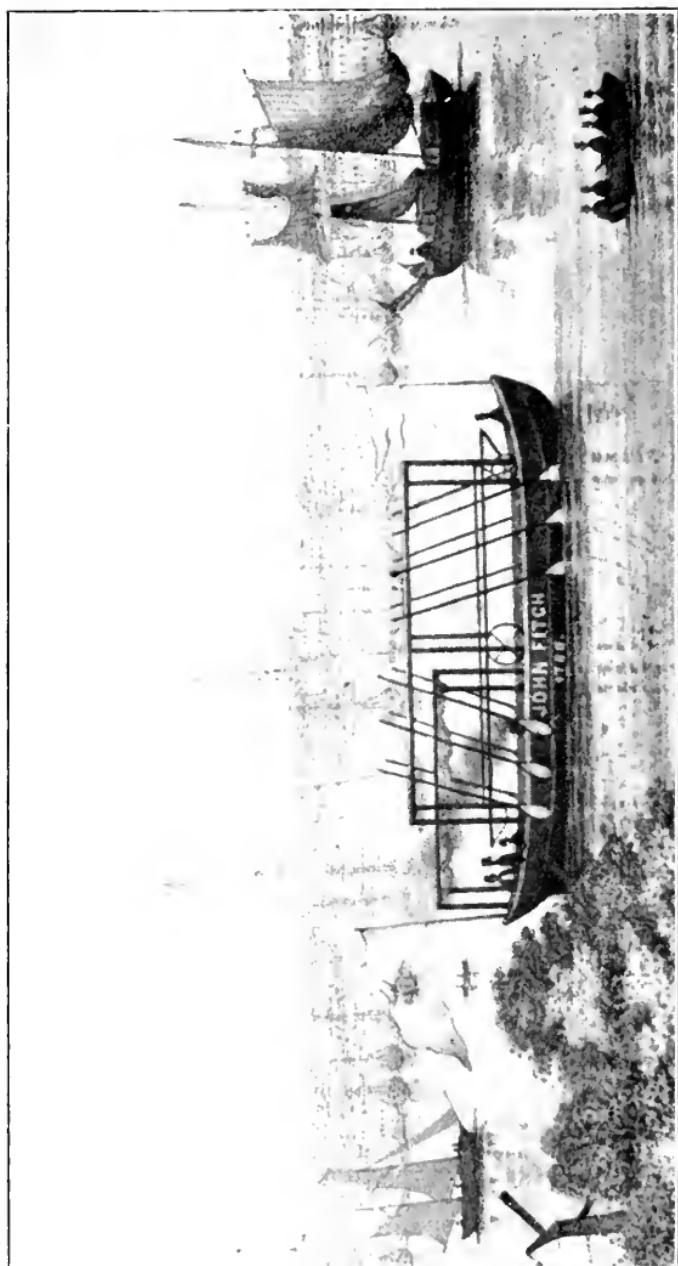
A new distinction was added to the noble Hudson, that of being the first river on which a successful demonstration of steam navigation had been made. There had been previous efforts made both in this country and abroad to apply the steam engine, yet in the infancy of its development, to the navigation of boats, but without practical results.

Fulton himself had made a trial on the Seine, France, in 1803, and failed. The boat was too frail to stand the weight of the engine and boilers and they had broken through the bottom of the craft during an overnight storm and sunk in the river. Others had tried before him. James Rumsey in 1784 on the Potomac sought

to propel a boat by forcing a jet of water from the stern with pumps worked by steam. Some of his experiments with the boat were witnessed by General Washington and other officers of the Army, but they were failures. John Fitch had tried his boats on the Delaware at Philadelphia (1790), and on the Collect Pond, N. Y. (1796), and failed. Elijah Ormsbee, with his "goosefoot" paddles, had attempted the same thing at Pawtucket, R. I. (1792), and John Stevens crossed the river from Hoboken to New York (1804) in a boat fitted with a steam engine of his own construction, but all of these efforts were barren of practical results.

It remained for Fulton to inaugurate on the Hudson the system of navigation that was to revolutionize the carrying trade of the world.

Robert Fulton was born on a farm in Little Britain, Pa., November 14th, 1765. His father was an Irishman, of Scotch ancestry, however, named Robert Fulton, who settled in Philadelphia and there married Mary Smith, a native of that city. Most of his early education was received in a school at Lancaster, Pa., where the family had removed, presided over by a dignified Quaker. Fulton was not an apt pupil. When not busy with his books, for he was not a lazy scholar, he haunted the shops of the town, as he early manifested an interest in all mechanical matters. A gunsmith's shop in the village seemed to possess an especial at-



JOHN FITCH'S EXPERIMENT

Reproduced from an engraving in Reiger's "Biography of Robert Fulton." Fitch attempted to propel his boat on the Delaware River with large oars moved by a steam engine.

traction for him and some of his suggestions were even adopted by the workmen. While a boy Fulton made sky rockets for his own amusement, and experiments with mercury and bullets gave him the name of "Quicksilver Bob" among his companions.

He early developed an aptitude for making sketches, and at the age of seventeen, having determined to become an artist, left for Philadelphia to study. His father had been dead several years, but he had been an intimate friend of the father of Benjamin West, who had then become a celebrated painter. It is more than likely that this fact fired young Fulton's ambition to become an artist. Afterward Fulton met West, the artist, in England and they became fast friends.

In Philadelphia young Fulton painted portraits and landscapes, made drawings of houses and machinery and busied himself so industriously during the four years of his stay in the city, he not only supported himself, but was able to contribute something to his widowed mother at home. He must have made considerable money, for in 1785 he bought a farm at Hopewell, Washington County, Pa., paying eighty pounds sterling for it, and in this homestead he installed his mother and the family.

Fulton, while in Philadelphia, met Benjamin Franklin and many who had become prominent during the Revolution, then just brought to a close. It is quite likely that some of these may have suggested the idea,

which he put into effect as soon as he was twenty-one, of making a trip to Europe. This was a great undertaking in those days and especially for one so young. He carried several letters to Americans abroad from his friends in Philadelphia, and he had already made the acquaintance of Benjamin West by correspondence. West was so pleased with his young countryman, he took him into his own family, where he remained several years. This introduction to the English people by West, then at the height of his fame as an artist, did much for Fulton. He industriously painted portraits and landscapes, which gave him a means for support, but he was constantly making mechanical experiments.

He published a pamphlet on canals, patented a dredging machine and several other inventions, some of which were of great utility.

Fulton went to Paris in 1797, having acquired more fame as an inventor than a painter. There he secured accommodations in a hotel occupied by Joel Barlow, an American citizen, also somewhat of a projector and a man of considerable literary ability. Barlow produced among other works "The Columbiad," a national epic, which he dedicated "to his friend Robert Fulton." In Paris, Fulton studied French, German, mathematics and chemistry. The practical result of the application of the two latter studies was that his active mind turned to the production of tor-

pedoes, and of submarine boats from which to fire them, at the hulls of an enemy's warships.

He achieved some success with both. He gave an exhibition of his plunging boat in the harbor of Brest before commissioners of the French Admiralty, in 1801, using air stored in a copper globe, condensed to 200 atmospheres, from which he took supplies of fresh air as required. He stayed under water over four hours and was highly pleased with the result of his effort, but he failed to secure any aid from the French Government to develop the invention.

The English Government, always alert to what the French were doing in those days, invited Fulton to come to England with his torpedoes and diving boats. It was, of course, as it had to be, a very circuitous, round-about sort of invitation, and there were many vexatious delays. When Fulton finally reached London in May, 1805, he found the men who had invited him there, retired from office. Finally, through Pitt's influence, which had been secured, he blew up an old brig, *Dorothea*, provided by the Government. The boat had been anchored in Walmer Roads near Deal. Walmer Castle, hard by, was the residence of Pitt, the Prime Minister, and he and a large number of officers in the navy witnessed the torpedo experiment, which was in a way a success, for the old brig was blown to splinters and sank.

A Royal Commission, after considering the matter for

a long while, offered Fulton a reward for his trouble and expense if his torpedo system was suppressed, as it was deemed inhuman warfare. He declined promptly and said twenty thousand pounds sterling a year would not tempt him to do so, if the safety and independence of his country should have need of his torpedoes.

Failing to convince the English he resorted to America and induced the United States Government to place an old vessel at his disposal for an experiment. The torpedo machinery did not work right this time and the trial was a failure. Fulton knew why, but explanations did not avail and the Government did not adopt the device.

Modern torpedo warfare has developed along the lines Fulton projected and none of the great maritime nations are now without their torpedo stations and torpedo boats in their navies.

Fulton left a record of his efforts in this field of investigation, entitled "Torpedo War and Submarine Explosions, by Robert Fulton, Fellow of the American Philosophical Society and of the United States Military and Philosophical Society." The imprint is 1810 and it was issued from the shop of William Elliott at 114 Water street, New York City. It was addressed to President Madison and the Members of both Houses of Congress. The title page bore the inscription "The Liberty of the Seas will be the Happiness of the Earth."

This, it should be borne in mind, was one hundred years before steam, electricity, compressed air or any of the modern methods of propulsion had been developed to the perfection that makes it feasible to apply them to the present-day submarines. Fulton was called a visionary, when in fact he only prophesied in part, that of which the present generation has an everyday realization.

Fulton's busy mind had not alone been occupied with torpedoes. He had conceived the idea of propelling boats by steam as early as 1793. So had others and many were experimenting. Chancellor Robert R. Livingston, of New York, who thought he had solved the problem in 1798, secured the passage of an act by the New York Legislature, giving him the exclusive right to navigate all kinds of boats which might be propelled by the force of fire or steam on all the waters of the State, for twenty years, provided that within a year he would produce a boat whose progress should not be less than four miles an hour.

Livingston built his boat, but it failed, and he went to France as the United States Minister. In Paris he met his fellow countryman, Fulton, and the two were soon deeply interested in the steamboat proposition. A boat was built and equipped with an engine, on the Seine, in 1803, and came to grief as already stated. The engine and boiler were fished out of the river and put in a boat sixty-six feet long and eight feet beam.

She had paddle wheels at the sides and though she moved through the water and was considered wonderful by those who saw her, she was a disappointment to both Fulton and Livingston. They determined to make another effort with a larger boat to be built in America and to be sailed on the Hudson. Livingston was to supply the money and Fulton to do the work, and it was thus the first successful steamboat came to be built, Fulton returning to New York in 1806 for this purpose.

Livingston, who thus became Fulton's partner in the development of steam navigation, was one of New York's most famous men in the early Colonial period. He was a member of the Continental Congress, one of the committee that drafted the Declaration of Independence, one of the framers of the Constitution of the State of New York, its first Chancellor, administered the first Presidential oath at Washington's inauguration in New York City and while Minister to France and experimenting with Fulton on steamboats, negotiated the purchase of Louisiana from Napoleon.

He and Fulton became fast friends. Fulton married Harriett, daughter of Walter Livingston, a relative of the Chancellor's, and when he came to die as he did February 24, 1815, he was buried in the Livingston vault in Trinity Churchyard, New York City. He left his wife, one son and three daughters. For years no monument marked the grave of this distinguished



ROBERT FULTON

From a photograph of the original painting made in England about 1795 by Benjamin West, and now owned by Fulton's grandson,
Robert Fulton Ludlow of Claverack, N. Y.

man. It was not until thirty-one years after Fulton's death that Congress voted something like \$76,300, without interest, to reimburse him for the contracts he held at the time of his death with the Government for building the *Vesuvius* and other vessels of war.

He was about six feet tall, well proportioned, had a face marked with strong features and dark curly hair. He was at all times a gentleman and a most engaging and instructive conversationalist. When at work on one of his projects or inventions he labored with indomitable industry and knew no discouragement, even when failure confronted him. His faith in himself and his inventions made him surmount every difficulty. To him, failures were ever "the stepping-stones to success."

CHAPTER II

THE FIRST STEAMBOAT

BEFORE returning to America, Fulton, after making the compact with Livingston to build a boat on the Hudson, hastened to England to place the order for the engine.

It was built largely after Fulton's plans and drawings at Boulton & Watt's shops, in Birmingham, and sent to this country. It had a twenty-four inch cylinder and four foot stroke, while the boiler was twenty feet long, seven feet deep and eight feet wide.

The boat was built on the East River at the yards of Charles Brownne. It was one hundred and thirty feet long, sixteen feet beam, seven foot hold, and drew twenty-eight inches of water. Others give her length as one hundred and thirty-three and one hundred and forty feet and draft as four feet. The paddle wheels were at the side and uncovered. They were fifteen feet in diameter, four feet wide with a dip of two feet. She was named the *Clermont* after Chancellor Livingston's

country seat on the east shore of the Hudson River in Columbia County.

After many disappointments and delays Fulton left New York for Albany, August 17, 1807, in his little boat, making the trip in thirty-two hours, and successfully demonstrated to the world the possibilities of steam navigation. Others place the date of this first steamboat trip as one week earlier.

Fulton's own account of that first memorable trip is: "I left New York on Monday at four o'clock and arrived at Clermont, the seat of Chancellor Livingston, at one o'clock on Tuesday, time, twenty-four hours, distance, one hundred and ten miles. On Wednesday I departed from the Chancellor's at nine o'clock in the morning and arrived at Albany at five in the afternoon; distance, forty miles, time, eight hours. The sum is one hundred and fifty miles in thirty-two hours, equal to near five miles an hour. On Thursday at nine o'clock in the morning I left Albany and arrived at the Chancellor's at six in the evening. I started from thence at seven and arrived at New York at four in the afternoon; time, thirty hours, space run, one hundred and fifty miles. Throughout my whole way, both going and returning, the wind was ahead; no advantage could be derived from my sails; the whole has, therefore, been performed by the power of the steam engine."

With what solicitous care every stroke of the piston,

every turn of the paddle wheels and every pound of steam in the boiler must have been watched by the indomitable Fulton. With what pride he must have written his old friend Joel Barlow:

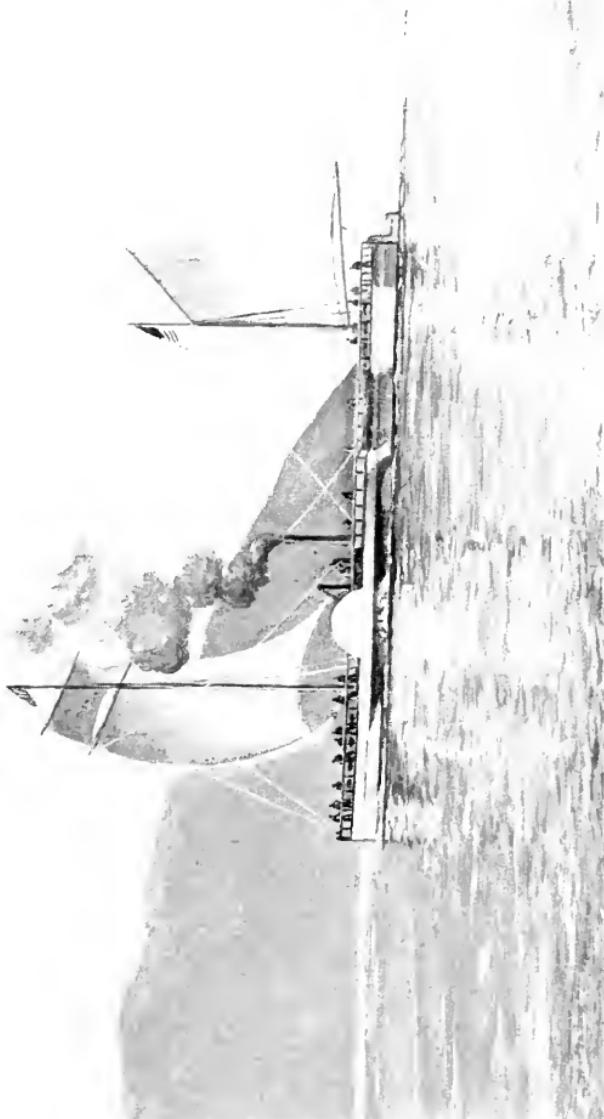
"The power of propelling boats by steam is now fully proved. The morning I left New York there were not perhaps thirty persons in the city who believed the boat would ever move one mile an hour, or be of the least utility and while we were putting off from the wharf I heard a number of sarcastic remarks. This is the way in which ignorant men compliment what they call philosophers and projectors."

It will be noticed that in Fulton's account of his trip he impresses the fact that under adverse circumstances he made nearly *five* miles an hour. This fact meant much both to him and Chancellor Livingston. They had procured another enactment by the Legislature giving them the exclusive right and privilege of navigating all kinds of boats by steam, on all the waters of the State for the term of twenty years, upon condition that they would produce a boat of not less than twenty tons burden, which would move with and against the current of the Hudson River at the rate of *four* miles an hour.

The condition had been fulfilled, steamboating on the Hudson had begun, but many a hard-fought battle was ahead of Fulton and Livingston to protect the "exclusive" privilege the Legislature had given them.

"THE CLERMONT"

Reproduced from an original drawing by Samuel Ward Stanton, showing her as she was arranged a few months after launching for use as a passenger packet



One of the incidents of this first eventful trip of the *Clermont*, which should not be overlooked, is said to have been the announcement of the betrothal of Fulton to Harriet Livingston, a relative of the Chancellor's, and whose subsequent marriage has already been noticed in the preceding chapter.

The success of the *Clermont* as a passenger boat was assured from the first. People would not content themselves with the slow travel of the sloops or stage-coaches when they could go to Albany in thirty-two hours on the steamboat! The dangerous competition, however, was feared by the rivermen. The new steamboat was obstructed by the sloops and fouled intentionally. The very next winter the Legislature was compelled to enact a law imposing a fine and imprisonment on anyone willfully attempting to injure the *Clermont* or any other steamboat. The same act also provided a five year extension of the exclusive privilege to Livingston and Fulton, for every additional boat they should build and put on the river.

The *Clermont* was much like a schooner, built with two masts and an exceedingly large funnel, for she burned pine wood under her boilers. She poured out volumes of black smoke, which at night assumed a more startling effect, on account of the sparks that flew out with the smoke.

A writer of the day assures us:

“The crews of many sailing vessels shrunk beneath

their decks at the terrific sight, while others prostrated themselves and besought Providence to protect them from the approach of the horrible monster which was marching on the tide and lighting its path by the fire that it vomited."

One of the farmers who witnessed this strange apparition on the river hurried home and assured his wife and friends he "had seen the devil going up the river in a sawmill."

As soon as the *Clermont's* first season was closed, she was hauled out of the river at Red Hook for several improvements, which the practical operation of the boat had suggested to Fulton's mind. She was increased in length from one hundred and thirty to one hundred and fifty feet and in beam from sixteen to eighteen feet. Her cabin work was enlarged and her machinery overhauled. The east iron wheel shaft was replaced by one of wrought iron and outside supports were built for the paddle wheel shaft, relieving the strain that had been manifest from the first. The paddle wheels were also boxed in at the same time. She was renamed the *North River* and went into regular service on the Hudson at the opening of navigation. Her boiler, however, gave out and after a delay of two months she was fitted with a new one and the boat ran regularly for the balance of the season, with Samuel Jenkins as captain and David Mandeville as pilot.

One of the last survivors of the first trip of the *North*

River to Albany, in a letter written in 1857, describing the trip, says:

"At the hour appointed for her departure, 9 A. M., Chancellor Livingston with a number of invited friends came on board, and, after a good deal of bustle and no little noise and confusion the boat was got out into the stream and headed up the river. Steam was put on and sails were set, for she was provided with large square sails, attached to masts, that were so constructed that they could be raised and lowered as the direction and strength of the wind might require. There was at this time a light breeze from the south and with steam and sails a very satisfactory rate of speed was obtained, and as the favorable wind continued we kept on the even tenor of our way and just before sunrise, next morning, we were at Clermont, the residence of the Chancellor, who with his friends landed and the boat proceeded to Albany, where she arrived at two or three o'clock, P. M."

It cost something to travel by steamboat those days, but the boat did not lack patronage. There was no fare less than \$1.00 for any fraction of twenty miles. From New York to Verplanck's Point it was \$2.00, West Point, \$2.50, Newburg, \$3.00, Wappinger's Creek, \$3.25, Poughkeepsie, \$3.50, Hudson, \$5.00, and Albany, \$7.00.

Fulton, as soon as he produced a practical steamboat, turned his attention to steam ferryboats for the

North and East Rivers. The *Jersey* was put on the river in 1812 and the *York* in 1813. These took the place of the old ferryboats which were propelled by driving two or four horses round and round in the hold of the boat. The horses were attached to a pole connected with a gear movement that rotated the paddle wheels. These horse boats were most primitive affairs and very, very slow.

The steam ferryboats produced by Fulton were a great improvement on the old horse boats, in both speed and comfort. They were twin boats having two complete hulls and united by a bridge, shaped at both ends so that they could move in either direction with equal rapidity. One of the boats made the trip across the river loaded with eight four-wheel carriages, twenty-nine horses and one hundred passengers, and it was considered a great feat.

Not only did Fulton devise the ferryboat, but he produced the pontoon or floating bridge-dock that rises and falls with the tides and makes it possible for the trucks and carriages to drive on and off the boats substantially as they do to-day.

Though Fulton's grave in Trinity Churchyard for years was not marked by any monument, his name was honored in Fulton Ferry and to-day you may take the ferryboat *Fulton* if you will, from the foot of one of New York's most busy streets of the same name, and land at the foot of the principal street in Brooklyn,

also bearing the same illustrious name. Further, as you leave the ferryhouse on the Brooklyn side you will walk beneath the statue of Fulton, holding in his hand a model of his ferryboat. You have never noticed it possibly. Next time you are going that way, look; it will pay you.

CHAPTER III

SOME OF THE OLD-TIMERS

THE improvement of steamboats began immediately after the *Clermont's* successful trip. Practical conditions had demonstrated the lines along which changes were necessary.

Many others, including Col. John Stevens, of Hoboken, who closely presses Fulton for the honor of practically developing steam navigation, were at work on the same problem. Stevens developed and patented a return tubular boiler that added materially to the efficiency of the steam engine. The boilers in Fulton's first boats were of copper, most primitive affairs, and little more than closed vessels in which to confine the steam so as to make it available for use under pressure.

Fulton's next boat for river travel after the *Clermont*, had the ambitious name of the *Car of Neptune*. She was put on the river in 1809. She was one hundred and seventy-five feet long and was two hundred and ninety-five tons burden. In 1811 the *Paragon*, one hundred and seventy-three feet long, was built and ran on the

river, alternating with the *Car of Neptune*. Each of these boats was an improvement on its immediate predecessor, but they were small, most of the space being devoted to machinery. The accommodations for passengers were limited, and freight was seldom, if ever, carried. The time of the passage was cut down nearly one-half that of the *Clermont*.

Fulton died in 1815 and did not witness the completion of the *Chancellor Livingston*, for which he had outlined plans. This vessel was a marked advance on his other boats. She was one hundred and fifty-four feet long and thirty-two feet beam, and drew seven feet three inches of water when loaded and measured four hundred and ninety-six tons burden. Her engine was seventy-five horse power with a forty-five inch cylinder and seven foot stroke. The boiler was twenty-eight feet long and twelve feet in diameter. She had two funnels and the paddle wheels were seventeen feet in diameter. There was a main cabin fifty-four feet long, with thirty-eight sleeping berths; above that a ladies' cabin with twenty-four berths and a forward cabin, with fifty-six berths. These, with the berths for the crew, provided sleeping accommodations for one hundred and thirty-five persons and she was considered a great boat in her day. She could make twelve miles an hour with the tide and six against it. Subsequently she was lengthened and provided with a more powerful engine. For sixteen years she successfully navigated

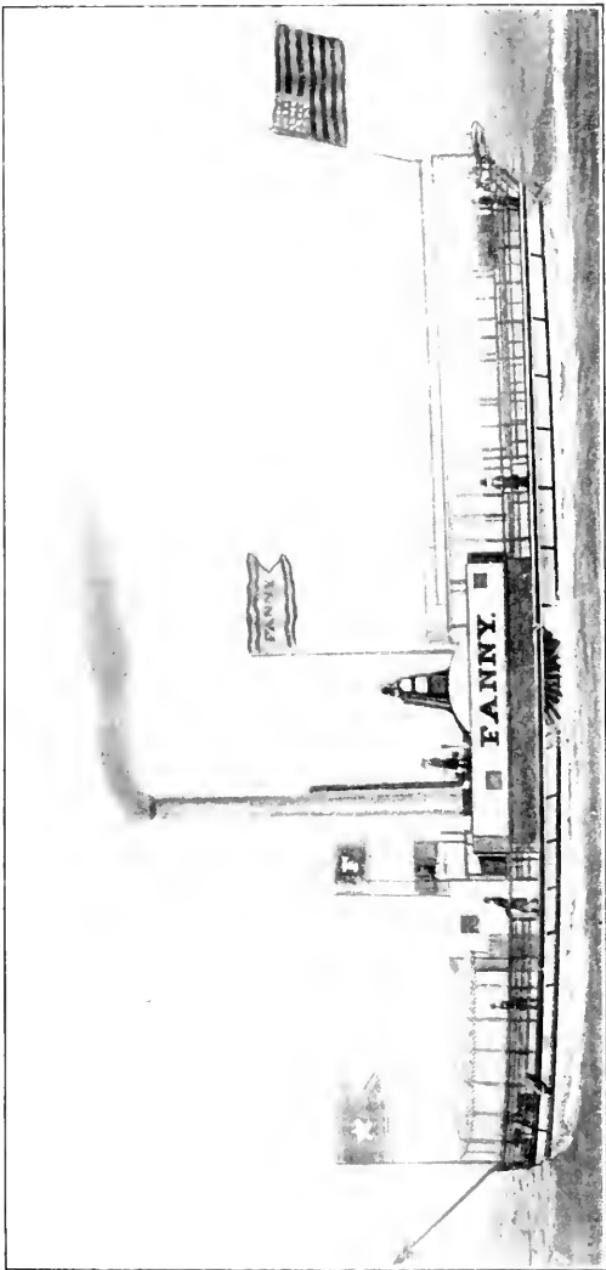
the Hudson, taking part in the grand naval display that marked the completion of the Erie Canal, and figured in most of the important events on the river in that period. "Commodore" Vanderbilt bought her in 1832 and ran her as an opposition boat on the line between Portland and Boston where she continued until "broken up," a fate that generally overtakes most boats, when old age has developed such a structural weakness as to render them unsafe.

Little advance was made with new river boats until the monopoly of Fulton and Livingston was broken in the twenties, after which capital was quickly found for investment in new river craft.

Two new steamers, the *Constellation* and *Constitution*, appeared in 1826. They were a marked improvement on the *Chancellor Livingston*. They cut down both the time to Albany, as well as the fares, and became great favorites with the public. They were much longer and of greater beam. The question was gravely considered whether craft of this length could be successfully navigate the turns of the river.

The development of the steamboat in length is shown perhaps more clearly in the statement given below:

	Feet
<i>Clermont</i>	130
<i>Car of Neptune</i>	175
<i>Ohio</i>	192



THE FANNY

One of the earliest day excursion boats on the river. From a photograph of a painting by James Bard

	Feet
<i>Albany</i>	212
<i>Swallow</i>	224
<i>DeWitt Clinton</i>	233
<i>Alida</i>	265
<i>Connecticut</i>	300
<i>Empire State</i>	304
<i>Hendrik Hudson</i>	320
<i>Oregon</i>	330
<i>Isaac Newton</i>	338
<i>New World</i>	385
<i>C. W. Morse</i> (Peoples' Line, 1907) . .	427
<i>Princeton</i> (Peoples' Line, 1908) . .	440

This list does not begin to include all the more prominent passenger boats of the time. There was the *Rip Van Winkle* and the *Henry Clay*, both popular boats with the public. Then there was the *Atlas* and the *Express*, *North America*, *South America*, *Bolivar*, *Richmond*, *James Kent*, *Independence*, *Nimrod*, *Champion*, *Rhode Island*, *Niagara*, *Troy*, *St. Nicholas*, *Fanny*, *Berkshire*, *Manhattan*, *Glen Cove*, *United States*, *Sandusky*, *Ohio*, *Henry Eckford*, *Albany*, *Union*, *Shephard Knapp*, *Hero*, *Eagle*, *Fairfield*, *Hope*, *Advocate*, *Robt. L. Stevens*, *James Madison*, *Cataline*, *Buffalo*, *Diamond*, *Hendrik Hudson*, *Empire*, *Erie*, *Champlain*, *Emerald*, *New Philadelphia*, *City of Hudson*, *P. G. Coffin*, *Legislator*, *Rockland*, *Helen*, *Jenny Lind*, *Westchester*, *Knickerbocker*, *Kosciusko*, *Isaac New-*

ton, Eureka, Nuhpa, Washington, Curtis Peck, Wave, Portsmouth, Gen'l Jackson, Illinois, Metamora, Iron Witch, Roger Williams, Confidence, New Jersey, Sun, America, Santa Claus, Thomas Powell and Columbia.

Of later date were the *Mary Powell, Dean Richmond, St. John, Daniel Drew, Chauncey Vibbard, Drew, the McManus, Andrew Harder, the W. C. Redfield, the M. Martin, the Catskill now the City of Hudson, the John L. Hasbrook now the Marlboro, the D. S. Miller now the Poughkeepsie, the Jas. W. Baldwin now the Central Hudson, the Thomas Cornell, the Wm. F. Romer, the Kaaterskill, the Coxsackie, the Ulster and the Chrystenah*, all of which helped to earn money for their owners and fame for their captains.

What a train of pleasant reminiscence the names of the old steamers invoke. Some will remember them, when in their pride of new paint and bunting, they endeavored to wrest the record for speed from their rivals on the river. Others will recall the journeys made to spend midsummer vacation days in the woods and mountains. To some, the memories will go back to the time of the greatest trip of all their lives—and may they have been happy ones—when they went honeymooning up the river, for mind you a steamboat journey in the days of which we write was quite the luxury of travel. Sadder journeys too have followed, when loved ones have been carried to the last resting place in the churchyards of the little North River

towns from which many families have drifted to the big cities.

The favorite sons of the young Republic were not overlooked in the names of the river steamboats. One of them bore the name of Kosciusko, the young Pole who fought with the Colonists in the War of Independence, and whose name in those earlier days was far more frequently heard than now. He was one of Washington's military family, being an aide to the General, and was much thought of by all the officers. After his return to Poland at the close of our war, he was made a prisoner for heading a revolution in his native country and imprisoned at St. Petersburg. He was finally liberated and revisited the United States in 1817, and several years after the cadets at West Point, erected the monument you can see from the deck of the passing boat, on the spot that marks the place where Fort Clinton once stood.

Another was the *General Jackson*, named in honor of "Old Hickory," who, after fighting for his country in 1812, captured the presidency, and another the *Henry Clay*, after the people's idol, the senator of Kentucky who never reached the Presidency, the height of his ambition, and whose namesake in the boat line became a disastrous wreck by burning near Riverdale.

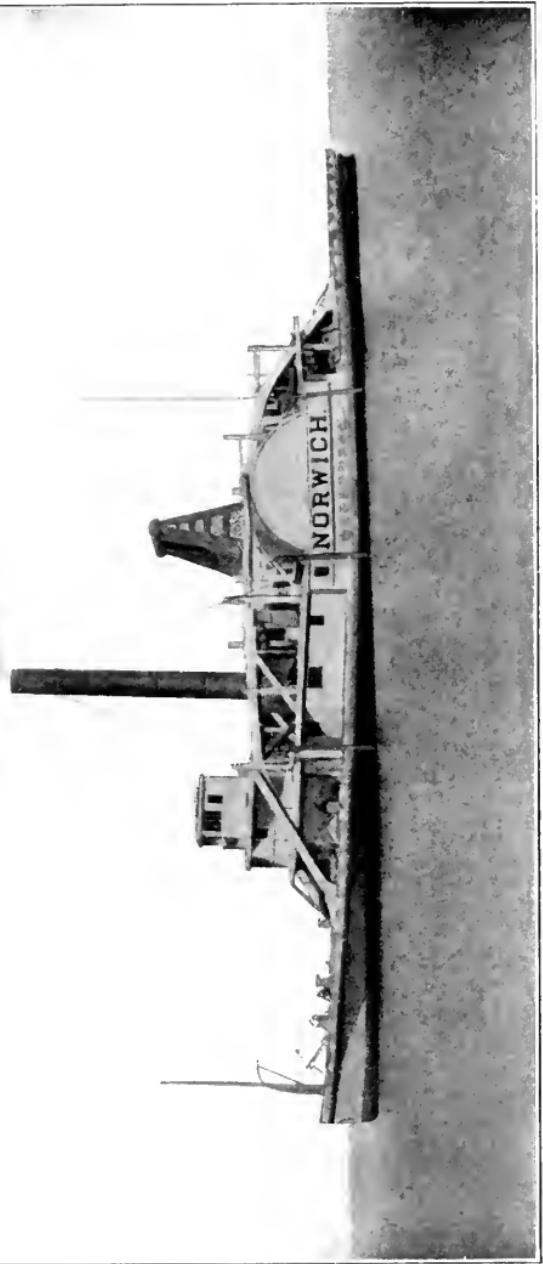
Many present-day readers who have noted among the old-timers the *Isaac Newton*, may have imagined it was Sir Isaac, the observer of the downward tendency

of unsuspended apples, that old boatmen honored, but such was not the case. Isaac Newton was a Rensselaer County man, who was thirteen years old when the first steamboat trip was made up the Hudson and retained a vivid recollection of that great event until his death in 1858. He became a boat owner, established the first line of tow boats on the Hudson and in 1835 brought out the steamboat *Balloon*, which was followed by the *North and South America*, *Isaac Newton*, *New World*, *Hendrik Hudson*, etc., whose elegant appointments for the accommodation of passengers secured for the Hudson River steamboats the appellation of floating palaces. Newton caused to be built nearly one hundred steam-boats, ocean steamers and river barges. He lived in New York City, was one of the principal owners of the People's Line of steamboats and an active Baptist in the Old Oliver Street Church. He was over sixty-three years old when he died.

Daniel Drew, Chauncey Vibbard, Erastus Corning, Capt. A. P. St. John and Dean Richmond were all captains of industry in their day and generation, whose investments in this line signalized them as proper persons for such historical fame as may be secured in the name of a steamboat.

Some of the old-timers have changed their names as frequently as a popular divorcee. There is the old *Tolchester* still doing duty, but with a history behind her. Boats, indeed, in changing their names are not

THE NORWICH
Built in 1836, this is undoubtedly the oldest steamboat in the world, and is still in use for towing in 1907.



unlike some women, in trying to have the past forgotten. Who remembers the *Tolchester* as the *Samuel M. Felton*, new in 1866? That is quite a way back, but there are gray heads whose memories go back to the old *Sleepy Hollow* which became the *Long Branch* and ran to the resort of the same name, then in the height of its popularity with the fashionable set as a summer place by the sea.

The Hudson River Railroad was not completed all the way through to Albany until October 8, 1851, when it was formally opened. The building had progressed as far as Poughkeepsie in 1850 and from that point the rest of the journey was made on the *Armenia* and *Joseph Belknap*, which ran in connection with the trains to and from New York City.

Reginald Fowler, an Englishman, who made a trip up the Hudson in the fifties on one of the old boats, said of them: "The Americans take great pride in these boats and spare no expense on them—the meals are well served and the bar produces every kind of beverage. In English steamboats the ladies are generally worse accommodated than the stronger sex. In America this is not the case; the best part of the boat is used for their accommodation. All must give way to them. No man is admitted into the dining saloon until all the ladies are seated at the table, when they rush in pellmell. After that should a lady require either, the chair is, without ceremony, taken from under you and

the plate from before you. No male epicure will here be able to gratify his appetite with tid bits. Should he make an attempt to do so it will be futile. A lady, sir! is considered sufficient. Away goes his plate which can only be followed with a sigh; remonstrance would be vain. The Americans pride themselves on their courtesy to women and consider it a sign of high civilization; and they are no doubt right, but it seemed to me to be carried to an extreme; that women were treated like petted children and that they must often feel rather annoyed than pleased by the excessive politeness and consideration shown them. At the same time it is an honor of this country that an unprotected woman of any age may travel through its length and breadth from Boston to New Orleans, from New York to farthest West without insult or the slightest attempt to take advantage of her youth or inexperience."

Most of the old boats of the Fulton type had a steeple engine operating a horizontal cross beam up and down which looks odd enough to-day when most river steamers have "walking beams," or are of the propeller variety with none at all. The up and down beam boats have all been broken up with but one exception so far as the author can learn. She is the old *Norwich* still in commission as a towboat on the upper river. She is probably the oldest boat on the river, having been built in 1836, and among rivermen is known as the "Ice King." Because of her stout hull and power-

ful engines she has generally been the first boat sent out in the spring to break the way through the soft ice.

Many were the improvements introduced on the new boats to attract passengers. Each in turn and degree presented something in comfort or increased speed. One of the most notable innovations introduced was on the steamer *Armenia* built for the Day Line, so called because it makes the entire trip from Albany to New York by daylight so as to afford its patrons a view of the beautiful river scenery.

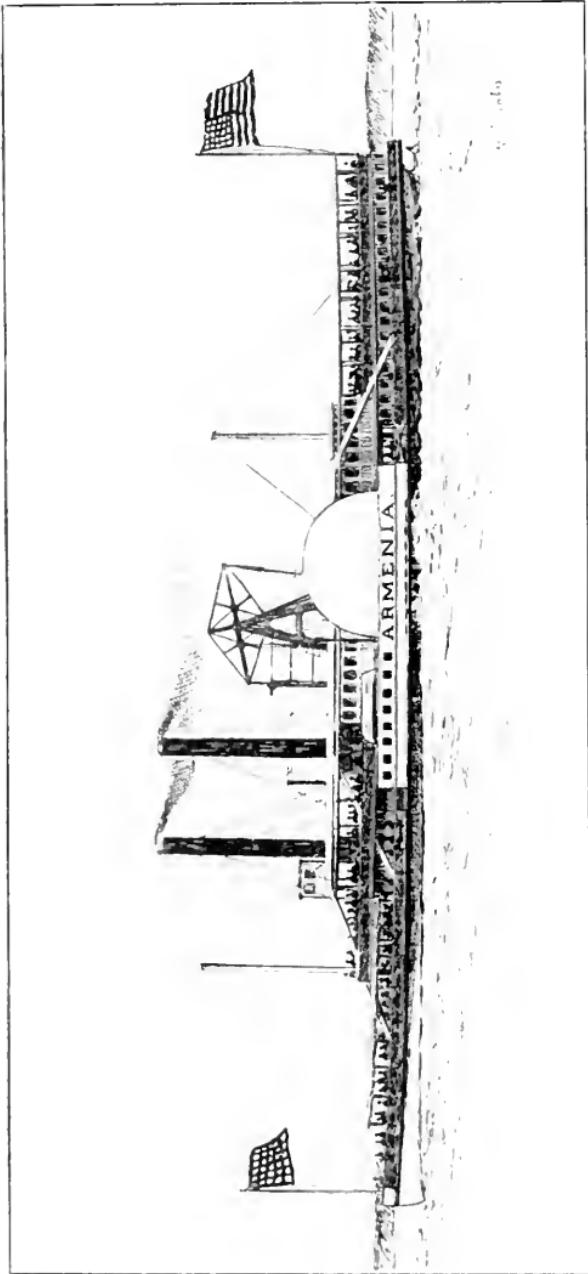
The *Armenia* had installed upon her a steam calliope on which tunes more or less musical were played. The resounding echoes awakened in the Highlands were somewhat weird and wonderful. The calliope was simply a series of steam whistles pitched in various keys, of sufficient number to produce the notes required to play a tune. Its range was about equal to that of the chimes in a church belfry. The *Armenia* was considered something remarkable when she first appeared, as indeed she was. The demand, however, on her boilers for steam to supply all the steam whistles was so great, that the expense of furnishing the passengers with steam tunes on the trips up and down the river was more than the operating company could afford. The calliope was taken out and sent to the junk shop. The *Armenia* ran for years without her musical attachment, and was one of the speedy boats of the river.

With her calliope on board she came near being an exemplification of the steamboat President Lincoln used to tell about, as reminding him of some men he knew. He said there was a fussy little steamboat on the Mississippi that had such a big whistle that every time they blew it, it took so much steam, the boat stood still.

There have been two other boats on the river with calliopes, the *Glen Cove* and the *General Sedgwick*, but the "steam organs" soon ceased to be a novelty and in time came to be considered an expensive nuisance.

Of the many old-timers on the Hudson, the ancient and odd-looking steam ferryboat *Air Line*, that has been plying between Saugerties and Tivoli since 1857, is entitled to the palm. For a half century this old boat has been doing duty and her crew have been so long with her they may be regarded as eligible to the ancient mariner class. Capt. John M. Burnett has run the boat for twenty-seven years, and Charles Taylor who began with him as engineer kept his post for twenty-two years before he died and was succeeded by George Mower who is still on duty. The deckhand, James Dickson, began to work on the boat as a boy and is now, after ten years of service, a grown man.

In the genus *steamboat*, species *jerry*, one of the most interesting specimens extant is the old chain craft still doing duty on the creek at Rondout. The chain ferries, so numerous in the years gone by, in some sec-



The Armenia

Reproduced by permission from "American Steam Vessels." This boat carried a calliope, a steam organ which played popular music for the amusement of the passengers.

tions of the country, have nearly all disappeared and certainly the one at Rondout is an antique. The boat is named the *Riverside*, but is more affectionately alluded to by the natives as the "Skilly Pot."

Three other points of interest should be noted in connection with early steamboat navigation. The first: Nicholas J. Roosevelt built at Pittsburg, Pa., the steamboat *New Orleans* in 1811 and sailed her down the Ohio and Mississippi Rivers to the city, in whose honor she was named. It was the beginning of the wonderful steamboat activity on the western rivers. The second; a boat bearing the unique name of *Walk-in-the-Water*, began running on Lake Erie in 1818. The third; a sailing vessel, the *Savannah*, which had been altered and provided with a steam engine, sailed from Savannah in 1819 for Liverpool and made the trip across the Atlantic in twenty-eight days, using both sails and steam. She was a side wheel paddle boat and the first to successfully demonstrate the application of steam to ocean navigation. She was so constructed that her paddle wheels could be unshipped in case of stormy weather and taken aboard the vessel.

CHAPTER IV

RIVAL LINES ON THE RIVER

FOLLOWING the successful introduction of steam navigation on the Hudson, came a long and bitter struggle. Fulton and Livingston had a fight on their hands from the first to maintain the monopoly covering a period of twenty years, given them by the Legislature of the State of New York, with its extensions for additional steamers.

Not only was the monopoly to steam navigation of the river attacked and the State law defied, a law which was plainly unconstitutional, but the validity of Fulton's patents was even questioned. Expensive litigation followed and the battle between the Fulton and opposing interests went on with varying success for several years. Chancellor Livingston, who had much influence at Albany, secured supplementary legislative enactments, but the monopoly to the river was never long maintained.

One of the earliest rivals for the passenger trade was a boat built by Fulton for service on Long Island Sound

between New York and New Haven, called the *Fulton*. The following announcement of the reason of her appearance on the Hudson River has a suggestive reference to the feeling of insecurity that possessed the public as to the navigation of the Sound following the second war with Great Britain in 1812:

“The public are respectfully informed that the subscriber has commenced running the steamboat *Fulton* between the cities of New York and Albany for the accommodation of passengers. The boat was built for the purpose of plying between New York and New Haven, but will be employed on the Hudson River until the cessation of hostilities enables the proprietors to put her on her destined route.

“The *Fulton* has good accommodations and is a very swift boat. The complement of passengers is limited to 60 and the price of passage is therefore necessarily raised to ten dollars.

“She will start from Albany every Monday morning at 9 o'clock and from New York every Friday evening at the same hour.

“For passage apply on board at Steam Boat dock.
“Albany, May 16, 1814. Elihu F. Bunker.”

Ten dollars was a big sum to pay for a trip to Albany and the *Fulton* did not make much of an inroad on the business of the regular line.

With an increase in the number of boats built on

other plans than Fulton's and owned by other interests, there came into existence rival lines competing for the passenger and freight business of the river. From 1830 to 1860 there were lively times among the steamboat men.

The fight over the river monopoly was on in earnest when a young man who had been running a sailboat ferry between Staten Island and New York, began to oppose the Fulton-Livingston interests. The young man was Cornelius Vanderbilt, afterward the "Commodore" and founder of the family of railroad millionaires of that name. His sail-ferryboats had been exchanged for steamboats and he had made considerable money. He entered into the Hudson River competition with the announcement that his service would furnish better boats and lower rates. This was what the people were looking for, and the established lines had to meet the conditions forced upon them.

There was a great strife to secure patrons. The town was placarded with bills more gaudy and enticing than the pictures of a side show at a circus. "Runners" for the rival steamboat lines made the water front a lively place. A man or a woman with a "carpet bag" became the legitimate subject of capture for the "runner's" line. Sometimes the man went by one line and his satchel by another. Every inducement was offered and nervous old ladies who were fearful of bursting boilers, were even assured by these "runners"

that their steamboats had no boilers. The arts resorted to by the "runners" and the amount of lung power expended would have put to blush the efforts of the "barkers" at the Battery at a later day for the rival steamboat lines running to Coney Island.

The high rates went down to one dollar for the trip, and eventually to ten cents; subsequently in a later competition for passengers, one could go to Albany or Troy without paying any fare, but it is said passengers had to pay well for their meals and sleeping accommodations.

"Commodore" Vanderbilt carried on his competition for Hudson River travel for nearly twenty years. He owned and operated nearly fifty steamboats in that period and would probably have continued in it, had not the discovery of gold in California in 1848-49 induced him to seek what promised to be a more profitable field in Atlantic and Pacific Ocean navigation, by way of the Isthmus of Panama.

There was a great tide of travel and merchandise moving toward California in those days and "Commodore" Vanderbilt was among those to reap the profit. He also established a transatlantic line and made money in that. Having amassed a fortune of many millions he turned his attention to the Hudson River Railroad which he gradually acquired and again began to threaten the interests of the steamboat men, who had adjusted the business among themselves on

a more profitable basis after "Commodore" Vanderbilt's retirement from the competition. For nearly fifty years this remarkable man was actively engaged in building and operating steamboats. He supplemented his experience on the river by building eleven ocean vessels and owning ten others and about the time of his retirement from the field of deep-water navigation gave the use of his best steamship, the *Vanderbilt*, to the United States, in 1861, as the Civil War was then in progress and the Government was sadly in need of vessels.

There were other periods of rife and bitter competition on the river. Following the opening of the Harlem and the Hudson River Railroads, rates were again cut and one could travel from New York to Albany or Troy by either boat or train for less than it cost to reach midway points on either system.

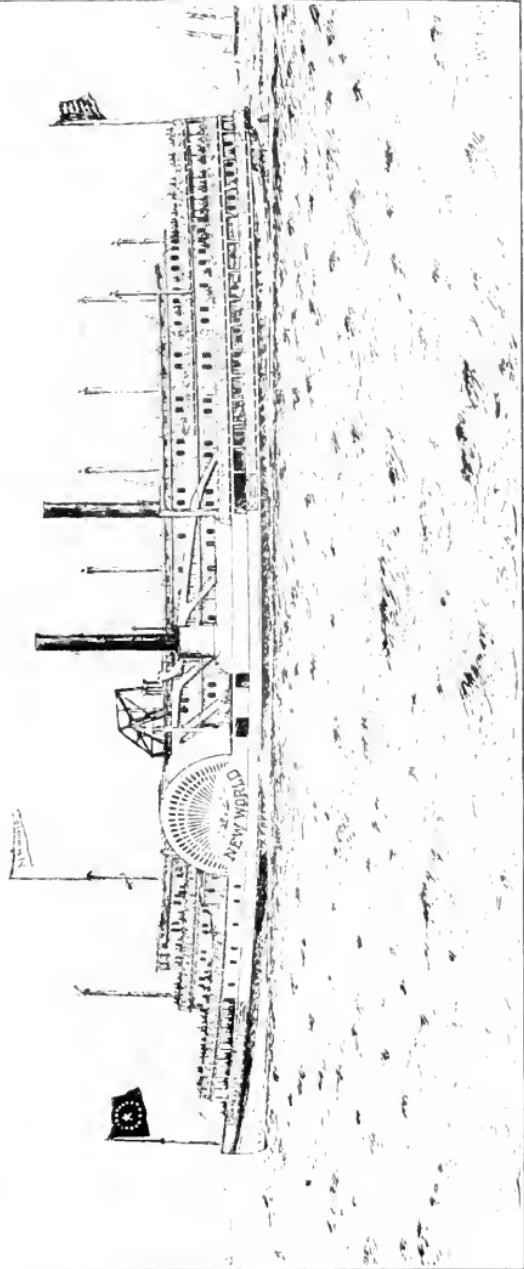
To meet the competition of the railroad in March, 1850, the *Hendrik Hudson* and *Manhattan* announced a fifty-cent rate to New York from Albany, the *Buffalo* a twenty-five-cent rate and a passage on the *Kosciusko* could be had for six and one-quarter cents.

Again, about 1860, the rival lines on the river opened a ruinous warfare of rates and one could travel from New York to Albany for a dime or without paying anything.

In 1826 there were sixteen steamboats on the Hudson and the number had increased to about one hundred

THE NEW WORLD

One of the popular New York-Albany night boats, 1847-1864. Reproduced by permission from a drawing by Samuel Ward Stanton in "American Steam Vessels,"



by 1840, when steamboating reached the height of its glory and usefulness.

Some of the old companies operating at that period were the Union Line, the North River Line, the Connecticut Line, the North River Association Line, Troy Line, O. & D. Transportation Co. and the Steam Navigation Co., and later the Old Line, People's Line, Night Line, Eagle Line and the Day Line were the principal companies engaged in river transportation.

Some idea of what was doing in those days may be gathered from the fact that at times no less than seven steamboats left Albany for New York on a single day. The *New World*, described as a "gigantic specimen of steamboat architecture" when she appeared, held the record for passengers, having taken up the river one thousand, in August, 1857.

The large boats were coining money, even at one dollar per trip. It was estimated that with four hundred and fifty passengers the returns would show for tickets \$450, berths and staterooms \$320, from freight \$393, a total of \$1,163 from which \$200, the estimated expense of a trip, if deducted, would show a clear profit of \$963. It was profit like this that stimulated investment in steamboat enterprises and eventuated in ruinous competition.

There was much traveling, more on account of business than pleasure. There was neither telegraph nor telephone to overcome distances in a second's time and

even the railroads had not yet made any appreciable inroads on the river traffic. Passengers traveled by steamboat, but much of the freight was still handled by sloops. Great industrial trusts had not been formed limiting the supply; the country was prosperous and competition in every line of business activity contributed to make these the good old days recalled by many, who view with concern the many complex problems of the industrial life of the nation that are now pressing for solution.

CHAPTER V

HOW THE GREAT RIVER MONOPOLY WAS BROKEN

IT required the brilliant legal attainments of Daniel Webster and the conquering persistency of Cornelius Vanderbilt, to find a way to break the monopoly held under the Fulton and Livingston grant from the State of New York.

The State of New Jersey defied the State of New York in the controversy, and it was not until the United States Supreme Court stepped in and settled the dispute for all time, that the atmosphere was cleared and the free use of the river and bay was opened to steam-boats. Incidentally many fundamental questions of Constitutional Law, all new to the young Republic, were settled, and it did much to establish the authority of the Federal Government to regulate navigation and other interstate relations.

One would never believe so many important propositions of Constitutional Law, and much less its relation to breaking up the great monopoly of steam navigation on the Hudson, could be found in the misleading

parties named in a certain cause of action in the United States Law Reports, designated as Gibbons versus Ogden.

The history behind this action and the case itself is one of the most interesting in the books, having to do, as it had, with so many questions involved in the formative period of the nation. A much more intelligent understanding of the rapid expansion of steamboat enterprise building on the Hudson, the establishment of rival lines, the investment of capital and the fierce competition that followed will be gained by learning who Gibbons and Ogden were and how they came to represent the steamboat interests of two States. To do this one must learn how the river monopoly came to be created.

John Fitch, who was one of the first experimenters with steamboats in this country, had operated a boat on the Collect Pond, the site of which was occupied by the old Tombs prison in Center Street, New York. The pond only covered about four acres and his craft was a small rowboat. So great was the interest in the experiment, however, he had little difficulty in securing from the Legislature of New York, in 1787, the sole and exclusive right to navigate vessels by steam in all creeks, rivers, bays and waters within the jurisdiction of the State for fourteen years. Fitch having died or left the State and his experiments having been without practical results, the Legislature, in 1798, passed a law

which repealed the privilege to Fitch and granted it to Robert R. Livingston, who had meantime become interested in the matter, for a period of twenty years. We have seen that Livingston's efforts were also without results until he had met and become interested with Fulton. So it came about that the State law was again amended, in 1803, to extend the exclusive privilege to both Livingston and Fulton for a similar period. The trip of the *Clermont* to Albany, in 1807, had demonstrated steam navigation to be a success and the State of New Jersey, regarding the New York laws as trespassing upon its sovereignty, passed a statute that same year declaring its jurisdiction reached to the middle of the Hudson River, as far north as the territory of the State extended.

The next year the Fulton-Livingston interests secured the passage through the New York Legislature of an act extending the exclusive privilege three years for each additional steamboat constructed, the whole period, however, not to exceed thirty years, and forbidding any and all persons from navigating with steamboats the waters of the State which under royal grant were held to reach to the Jersey shore, without a Fulton-Livingston license, under penalty of forfeiture of the boat or vessel.

New Jersey came to the relief of its citizens with an act, in 1811, declaring that New York unjustly claimed an exclusive jurisdiction over the waters of that State.

It was the time for New York to act, and it did. In the same year it passed a law declaring forfeited any vessel or boat using steam, found navigating against the provisions of the previous laws of the State and a means by injunction was provided against removing any such boat from the jurisdiction of the State, that had been seized. New Jersey could not stand for that, so it passed a law in 1813 and again in 1818 passed other acts to uphold and enforce its statute of 1811. But the Fulton and Livingston interests went on suing out injunctions and making it quite as ineffectual for a Jersey man to run a steamboat as it was for a New Yorker, without a license such as was called for by the New York statute.

"Commodore" Vanderbilt became busy in 1820 in trying to find a way to overthrow the river monopoly. The New Jersey Legislature was only too eager to help and so an act was passed that year which among other things provided that if any of its citizens should be "enjoined or restrained by any writ of injunction or order by the Court of Chancery of the State of New York, by virtue or under color of any act of the Legislature of that State, from navigating any boat or vessel moved by steam or fire belonging or to belong in part or in whole to him, on the waters between the ancient shores of the State of New Jersey and New York, the plaintiff or plaintiffs in such writ or order shall be liable to the person or persons aggrieved for all damages,

expenses and charges occasioned thereby, to be recovered with triple costs," etc.

Here was just the situation the persons attacking the Fulton-Livingston monopoly had sought to create. Two sovereign States had passed laws in direct conflict. The Fulton-Livingston interests sued out their injunctions against two boats, the *Bellona* and *Stoudinger*, subsequently known as the *Mouse-in-the-Mountain*. "Commodore" Vanderbilt, who was the owner, was operating them from the Battery in New York State, across the Bay and the Kill von Kull to Elizabethtown, a very short trip, the latter place being in New Jersey. It was indeed nothing more than a steamboat ferry. Thomas Gibbons was the boats' master, and Ogden, the other party to the litigation that ensued, was a citizen of Newark, N. J., an ex-Governor of the State, holding a Fulton-Livingston license for the same privilege.

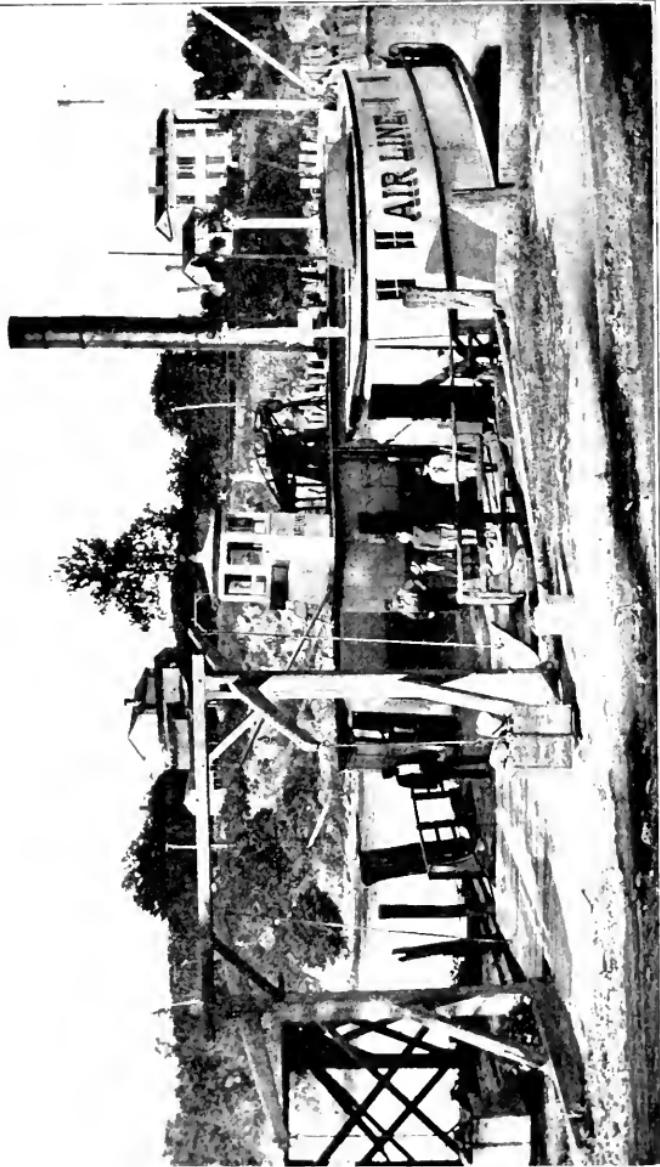
The case in New Jersey came before the Supreme Court of that State in 1822 and the Chief Justice (Kirkpatrick) promptly held, after discussing State's rights and Constitutional privileges, that New York had attempted to interfere with the ancient shores of New Jersey and that Mr. Gibbons was entitled to his damages and triple costs under the enactment of that State.

The Chief Justice told the parties, however, it was a question that ought to go to the United States Supreme Court and to the Supreme they went, Gibbons appear-

ing as the appellant from the decree of the New York court. It was the *cause célèbre* of its day, not only the people of the two States being interested, but the whole country having taken sides for or against the monopoly and there was talk of an interstate war. Indeed, a clash of authority had taken place.

That it was to be a battle for legal giants was early manifest, for Vanderbilt and those interested with him in breaking the monopoly had retained Daniel Webster, then in the zenith of his popularity, and the Fulton-Livingston interests, Mr. Oakley and Mr. Emmett, the latter having been Fulton's personal counsel and friend for many years. Every precaution was taken to make the case one of which the Supreme Court would have to take cognizance, the Gibbons boats having secured a license under the act of Congress of 1793, governing vessels employed in the coasting trade, with which, it was asserted, the injunction orders of the New York State courts unwarrantably interfered. The case was not reached in the Supreme Court until the February term of 1824.

Daniel Webster in a masterly brief and argument traversed the whole ground of the dispute and contended that the Legislature of New York had passed laws which were unconstitutional, inasmuch as the Federal Constitution had declared "Congress shall have power to regulate commerce with foreign nations, and among the several States and with the Indian



The Air Line

Built in 1857 and still running in 1907 as a ferry between Tivoli and Saugerties

tribes." Mr. Webster argued with prevailing force that the State had attempted to usurp the specially delegated powers it had given to Congress; that commerce was navigation and that the Federal regulations must apply.

He contended if New York could grant such a monopoly, it might also grant another for other description of vessels; for instance, for all sloops. If it could grant these exclusive privileges to a few it could grant them to many; that is, it might grant them to all its own citizens to the exclusion of everybody else. But the waters of New York State, insisted Mr. Webster, were no more the subject of exclusive grants by that State than the waters of other States were the subjects of such grants by those other States. Virginia might well exercise over the entrance of the Chesapeake all the power that New York could exercise over the Bay of New York and the waters on the shore.

But that was not all. It required no greater power to grant monopoly of trade than a monopoly of navigation. Of course, New York, if its acts could be maintained, might give an exclusive right to entry for vessels into her ports and other States might do the same. The people of New York had a right to be protected against the steamboat monopoly. The appellant had a perfect right to come from New Jersey to New York in a vessel owned by himself of the proper legal description and enrolled and licensed according to the law.

The Constitution made the law of Congress supreme, when State laws came into opposition with them. It was not at all material in that view of the case, whether the law of the State was a law regulating commerce, a law of police or whatever other name or character it might be designated. If this provision was inconsistent with the act of Congress, they were void so far as that inconsistency extended. There were other provisions of the Constitution of the United States with which the law of the State of New York was in conflict. It was provided "that no State should, without the consent of Congress, lay any duty upon tonnage." New York had authorized Messrs. Fulton and Livingston to license navigation in the waters of New York. They gave licenses out on their own terms and might require pecuniary consideration, or, having ascertained the tonnage of a vessel, regulate the amount of license upon same. That would be a tonnage duty and clearly in conflict with the Constitution. Mr. Webster also urged that the Constitution gave Congress the power to promote the progress of science and useful arts, to secure to authors and inventors, for a limited time, an exclusive right to their own writings and discoveries. The States might give exercise of their bounty toward authors and inventors and grant them bounties, but to attempt to confer exclusive grants as a reward was not a power to be exercised by the States. Much less could they, under the notion of conferring

rewards in such cases, grant monopolies incompatible with the exercise of rights held under the laws of the United States.

Mr. Oakley, for the monopoly, argued that the power given to Congress by the sovereign State of New York was limited, in that all rights not delegated, were reserved. The State had a right to legislate on all causes of concurrent power, although Congress had acted in the same power and upon the same subject-matter. The State might make it an offense to counterfeit the coin of any foreign country within its territory. New York had provided for the punishment of counterfeiting as had also Congress, all of which showed that Congress considered the power to punish such offenses as concurrent. A patentee obtained nothing by his grant, except an exclusive right, as it related to the Union instead of a right limited to the State together with more complete and certain remedies to protect and enforce that right. If he could not use the thing invented against the State law before it was patented, he could not use it after it was patented, for his grant conveyed no greater right than before existed. It belonged exclusively to the local State Legislatures to determine how a man could use his own without injury to his neighbors. A patentee could not give rights by which a patent could infringe the vested rights of others. A patented boat on a ferry could not be used, the exclusive use of which had been granted by a State

law. A restraint imposed by the laws of New York on the navigation of the waters of the State was merely an internal regulation of the right to transit or passage from one part of the State to another. It was a regulation which, if even indispensable to public safety, Congress could not make. The power to make it, therefore, must be in the State. The State law was, in fact, only a regulation of the internal trade and right of navigation within the territorial limits of the State. The power to regulate this was exclusively in the State. The State had exercised it in the same manner, both on land and water, and the law was valid although incidentally it might affect the right of intercourse between the States.

Mr. Emmett, on the same side, undertook to show that New York was not the only State which had passed such laws.

Massachusetts, on February 7, 1815, granted to J. L. Sullivan a similar grant for steamboats on the Connecticut River, twenty-eight years after the expiration of his patent, which on February 11, 1819, was enlarged for two years.

New Hampshire, in June, 1816, gave him a similar privilege on the Merrimac.

Pennsylvania, on the 26th of March, 1813, gave a similar right to James Barnes, from Wilkes-Barre to Tioga Point, on the borders of the State of New York. Georgia, on the 14th of November, 1814, gave a similar

grant to S. Howard for all the waters of that State for steamboats; and by another act, the 19th of December, 1817, granted to a company (probably derived from Howard) a similar right for steamboats for twenty years.

Tennessee had similarly given a right on the Tennessee River.

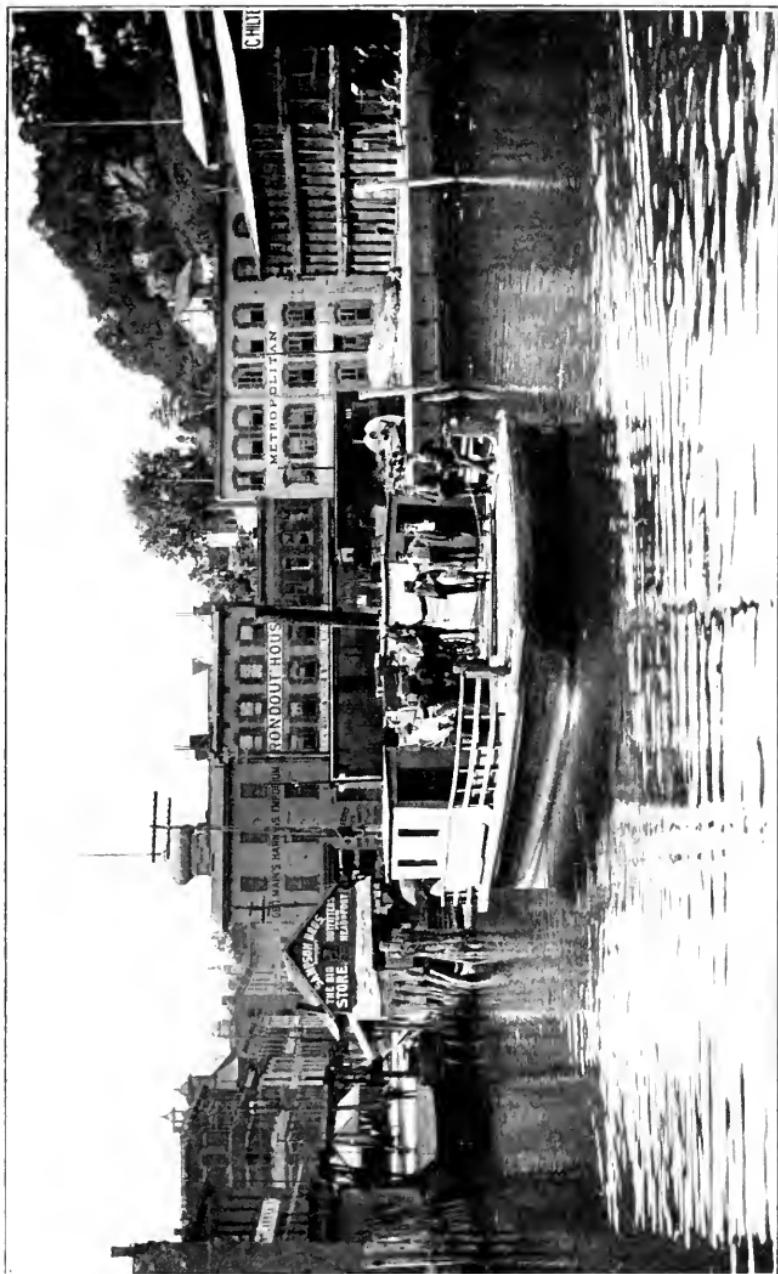
As Congress had no power to regulate the internal commerce of any State, none of its regulations could affect so much of the exclusive grant as restrained vessels which were used only within the States, nor could it give to any man permission to carry on any steamboat navigation which in its beginning and ending was entirely within the waters of the State, for instance, between New York and Albany, on Cayuga Lake, or Lake Ontario and the St. Lawrence or Niagara to Ogdensburg. The only question was as to navigation between foreign countries or another State and New York. If the power of Congress over commerce was exclusive, it must also have exclusive control over the means of carrying it on. No State then would be mad enough to expend large sums in building canals as New York was doing, susceptible of being used for intercourse between the States or foreign commerce, if Congress had the right to regulate the navigation and vessels that were the medium of foreign trade and that between the States. It could not be seriously contended that Congress could regulate the carrying of passengers to any

part of the Union who are traveling to Ballston, Saratoga, or any other place for pleasure, and even if the object of their passage was to trade, that would not legalize the interference of Congress as to the mode of their conveyance from place to place.

Continuing Mr. Emmett asserted: "If ever the day should come when representatives from beyond the Rocky Mountains shall sit in the National Legislature, if ever a numerous and inland delegation shall wield the exclusive power of making regulations for our foreign commerce, without community of interest or knowledge of our local circumstances, the Union would not stand. It cannot be the ordinance of God or nature that it should stand. It had been said by very high authority that the power of Congress to regulate commerce sweeps away the whole subject-matter. If so, it makes a wreck of State legislation, leaving only a few standing ruins that mark the extent of the desolation. The position, however, was not correct." . . . The quarantine laws were further appealed to to illustrate Mr. Emmett's position. It was held that they were all considered merely as laws of police. They were laws of police but also laws of commerce, for such is the nature of that commerce, which it was held must be regulated in some manner by Congress, that it enters into and mixes itself with almost all the concerns of life. The clause in the Constitution authorizing Congress to make laws respecting patents was supposed to present another argument

THE RIVERSIDE

An old time ferry still running in 1907 across Roundout Creek. The engine pulls on a chain which extends from one side of the creek to the other. From a photograph by A. M. Beale



against the constitutionality of the State laws. There was no allegation of a patent or a claim of anything entitled to be protected by the patent laws, the use and enjoyment of which had been interfered with by the exclusive grant. If the last steamboat laws, enacted since the North River boats were in operation, had, instead of using a general phraseology forbid any person to use on the waters of the State, steamboats constructed or made in the same manner as those made by Fulton and Livingston, or in any manner before known or used or in any manner invented by a non-resident alien, would there be anything for the patent laws or power of Congress to operate on in collision thereto? If not, then the State laws were so far good. The power to prohibit the use of patented things, either generally or locally, must reside somewhere. Could Congress prohibit the use of locally injurious, but patented things in the waters or the cities or the populous towns of New York? If not, because it had no power of regulation or prohibition, where did that power reside? If it resided as it must exclusively in the State Legislatures or subordinate authorities, who but their constituents could inquire into the motives or propriety or their exercise of that power or the extent to which it should be carried? A patent could be secured for anything; if it once issued from the patent office as full of evils as Pandora's box, if they were as new as those that issued from thence, it was above the

restraint and control of the State Legislature and the Legislature of the United States and of every human authority. The State of New York by a patient and forbearing patronage of ten years to Livingston and Fulton . . . by the tempting inducement of its proffered reward and by the subsequent liberality of its contract had called into existence the noblest and most useful improvement of the present day . . . she had brought into noonday splendor an invaluable improvement to the intercourse and consequent happiness of man which without her aid would perhaps have scarcely dawned upon our grandchildren. She had not only rendered this service to her own citizens, but the benefits of her policy have spread themselves over the whole Union . . . and the happy and reflecting inhabitants of the States . . . might well ask themselves whether next to the Constitutions under which they lived there was a single blessing they enjoyed from the art and labor of man greater than that they had derived from the patronage of the State of New York to Robert Fulton.

Finally came William Wirt of Virginia, the famous Attorney-General of the United States, amid the array of counsel, with the argument in support of Mr. Webster's, that the State law was in conflict with powers vested in Congress and, even if concurrent, as claimed, it was in conflict and, therefore, void. He asked the court to "interpose its friendly hand and extirpate the

seeds of anarchy which New York had sown. The war of legislation which had already commenced will, according to its usual course, become a war of blows. Your country will be shaken with civic strife. Your republican institutions will perish in the conflict, your Constitution will fall and the last hope of the nations will be gone."

Mr. Chief Justice John Marshall was quite equal to the important decision he was called upon to render in the steamboat case. In doing so, he added one more to the important opinions he rendered in fixing fast and sure the legal foundation the young nation required to make its new and untested Constitution a workable, respected organic law. In an opinion fully reviewing the important case before him, and even apologizing for its great length, he held that Congress in being given the power to regulate commerce, was given the power to regulate navigation. It was as expressly granted, as if the term navigation had been added to the word commerce already in the Constitution. "But," said he, "the power to regulate commerce does not look to the principle by which boats were moved. That power was left to individual discretion. . . . The act demonstrates the opinion of Congress that steamboats may be enrolled and licensed in common with vessels using sails. They are, of course, entitled to the same privileges and can no more be restrained from navigating waters and entering ports, which are

free to such vessels, than if they were wafted on their voyage by the winds instead of being propelled by the agency of fire. The one element may be as legitimately used as the other, for every commercial purpose authorized by the laws of the river, and the act of a State inhibiting the use of either to any vessel, having a license under the act of Congress, comes, we think, in direct collision with that act."

This opinion of the Chief Justice, supported as it was by a concurring opinion on some additional grounds by Mr. Justice Johnson, rang a death-knell to the Fulton-Livingston monopoly on the Hudson River and New York Bay. The decree which the United States Supreme Court issued declared "the several laws of the State of New York which prohibit vessels licensed according to the laws of the United States, from navigating the waters of the State of New York, by means of fire or steam, repugnant to the Constitution and void."

It was certainly a great victory. The battle had been fought for years. Fulton had been dead nine years and it was only the Livingston contingent that witnessed the overthrow of the monopoly that had been enjoyed for so long a period. We have already noted how promptly capital became interested in steamboat enterprises and how the rivers became crowded with navigation which continued for a quarter of a century, until the steam railroads began to dispute with the river craft for both the passenger and freight trade.

CHAPTER VI

STEAMBOAT EVOLUTION

A RAPID evolution in steamboat construction followed the breaking of the great river monopoly. The boat builders, freed from the domination of the Fulton-Livingston interests, were quick to develop new ideas that before had no encouragement from capital, which had been debarred from entering that particular field of enterprise.

The shipyards of New York and Greenpoint and along the Hudson were more than busy with the large number of boats under construction, and the activity in this line continued for many years.

Some of the builders of the larger boats were Henry Eckford, Brown & Bell, Blossom, Smith & Dimon, George Collyer, William H. Brown of New York, C. Bergh, Devine & Burtis, John Englis, William Capes, Lawrence & Sneden, E. S. Whitlock of Brooklyn, M. S. Allison of Jersey City, William Brown of Hyde Park, Mr. Kenyon of Albany, Morton & Ed-

monds and Van Loan & Magee of Athens and Marvel & Company of Newburgh.

Robert McQueen and James P. Allaire built nearly all the engines for the river boats constructed before 1830, but those for the *Swallow*, *Rochester* and other famous boats of that period were from the West Point Foundry, a plant noted for its output of machinery. James Cunningham, Hogg & Delamater, Fletcher, Harrison & Company, T. F. Secor & Company and the Neptune Iron Works were the most active producers of steamboat engines during the forties and fifties.

Following the example set by Fulton in the construction of the boiler for the *Clermont*, the boilers of all the best boats were built of copper as iron was found to be so liable to burst, and this fact made the construction of new boats very costly. The *Clermont's* boiler weighed 4,399 pounds and at 2s. 2d. a pound cost £476. 11s. 2d. as is carefully noted by Mr. Fulton in his cash account covering the expenses of building this first steamboat. The boiler of the *Chancellor Livingston* weighed 44,000 pounds and that of the *James Kent* 60,000 pounds, which at recent rates would have made the copper in the boiler alone worth nearly \$15,000. As it was, the *Kent's* boilers were worth nearly one-third of the cost of the boat.

It was not until 1830 that tubular boilers were introduced on the boats, the *Novelty* being the first to have that distinction, and it was some ten years later

that the burning of anthracite coal under the boilers was successfully introduced by Isaac Newton on the *North* and *South America* and the expense of fuel was cut down one-half. The large wood-burning boilers had required a prodigal expenditure of cordwood, which also demanded a large amount of deck room for stowage, and the introduction of hard coal fuel was considered one of the greatest advancements made in steamboat building.

Another of Isaac Newton's successful experiments was a small boat, the *Balloon*, built in 1839. She was one hundred and sixty feet in length and eighteen feet beam, but was very fast, having extra large paddle wheels for her size.

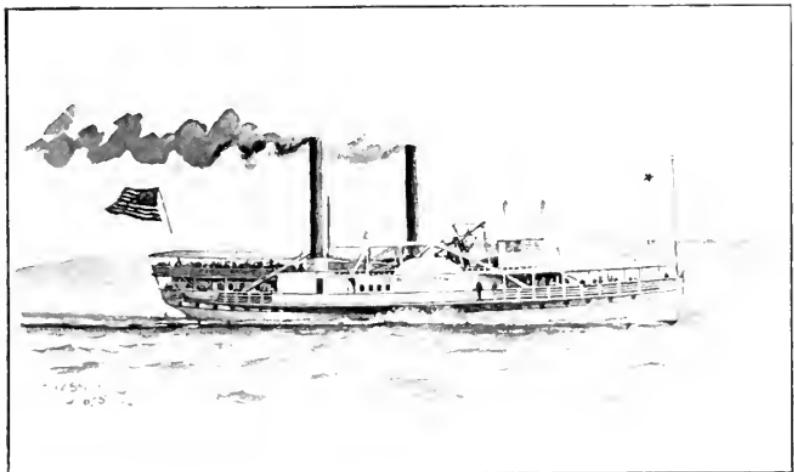
He also designed the *Isaac Newton* in 1846 and the *New World* in 1847 and they ran for several years as day boats. In 1855, however, both were converted into night boats, the latter being lengthened some sixty feet and a double tier of staterooms added. When these two boats appeared after their alterations, New Yorkers opened their eyes, and they were called floating palaces. Newton had introduced the grand saloon extending through two decks and surrounded with galleries. The *New World* was fitted up with Corinthian columns and trim and the *Newton* in Gothic. The saloons were lighted with gas, the cabin furnishings were elaborate and in many respects nothing approaching in elegance the two new night boats had ever before been seen afloat. The many new accom-

modations that these boats afforded travelers not only made a distinctive type for river boats which has since been closely followed, but did much to establish the popularity of the line with which they were identified and which has since been largely retained. The *New World* continued in the service until her mishap in 1861 and the *Newton* until she burned in December, 1863.

As early as 1844 there was an iron hull steamer on the river named the *Iron Witch*. She was subsequently rebuilt and named the *Erie*. The hull and engines were both constructed by Hogg & Delamater of New York. She was two hundred and twenty-five feet long and twenty-seven feet beam. She ran from New York to Albany. It was not until within a comparatively short time that any further attempts were made to introduce iron or steel into the hull construction of the river boats. All the recent additions to the river fleet have, however, steel hulls and water-tight bulkheads.

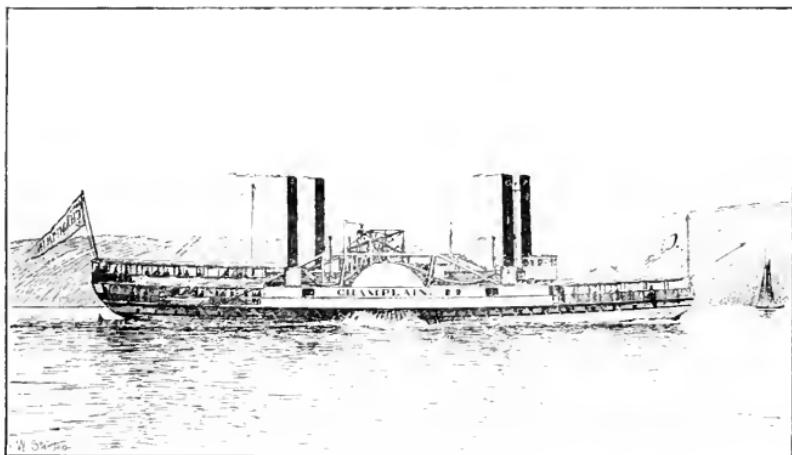
The boats of the Fulton type were built with their boilers well down in the hull of the boat, but in 1826, the *New Philadelphia* appeared with her boilers built on her guards, a form of construction that prevailed for many years.

Many still regard the old boats, such as the *Mary Powell* and *Dean Richmond*, more picturesque, affording glimpses of the stokers tossing the fuel into the fiery furnaces, than the newer boats which have re-



THE DE WITT CLINTON

Which ran with a sister boat, the *Victory*, between New York and Albany. From a drawing by S. W. Stanton



THE CHAMPLAIN

Known as a "Four Piper." She had four boilers, two engines and two walking beams. Reproduced by permission from "American Steam Vessels"

verted to the type of boats with the boilers down in the hold of the vessel. It is not at all likely, however, that any more steamers will be built of that variety, as the modern boats afford much more deck room than those of the other construction.

The propeller type of steamboat has never attained much popularity on the Hudson River, though there have been several excellent specimens of that class in service and some smart boats of that description of comparatively recent construction are now running on regular lines. They are apparently too narrow in beam to afford an opportunity for lofty construction, grand saloons and imposing cabin vistas, which the public seem to desire in traveling on the river.

All of the old boats were stiffened and hulls made to carry the enormous load of engines and boilers by resorting to a "hog frame." This was a framework of heavy timbers, built up truss fashion to which lifting rods were attached. These heavy "hog frames" are no longer resorted to in modern built boats and the trusses are entirely out of sight, giving the newer vessels a much neater and smarter appearance.

With the advance in mechanical appliances came the steam steering devices, rendering it unnecessary to have four stalwart quartermasters to handle the big double steering wheels in the pilot houses of the larger steamers; electric dynamos for lights supplanted the cumbersome gas machines that were in turn an

advance on the kerosene cabin lights, and feathering wheels have made it possible to so reduce the diameter of the paddles, that it is now possible to walk the length of the lower deck without climbing over the crank shaft or "ducking" to go under it.

The evolution of the steamboat from the primitive *Clermont*, on which Fulton sailed up the Hudson one hundred years ago, to the boats that now daily ply the river, affording every convenience to the passengers to be found in a first-class hotel on land, is truly wonderful.

CHAPTER VII

OLD RIVER CAPTAINS

THE captain of a river steamer in the old days and to-day is by far the most important man on the boat. He must be a trusty, experienced man and should be at all times agreeable to the passengers. Those on the Hudson have been for the most part men of this character and many became popular with the traveling public.

Before the days of *a la carte* restaurants on the boats, the captain had his table in the dining saloon, and the dinner hour aboard the steamboat was one of the features of the trip. Under the present regulations the captains, though always on duty and men of character and ability, are not as much in evidence to the average passenger as in the old days.

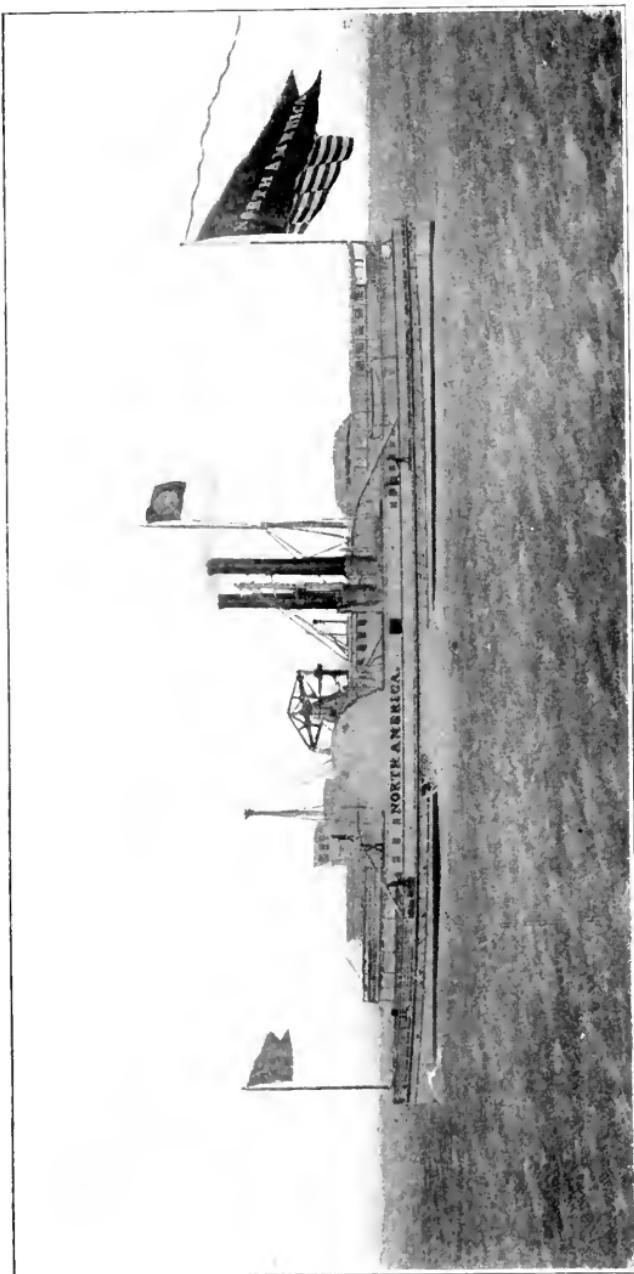
Capt. Samuel Jenkins commanded the *Clermont* after she was renamed the *North River*, in 1808, the *Car of Neptune* was in command of Captain Roorback in 1810 and the *Paragon*, in 1813, was in charge of Captain Wiswall. These men were, accordingly, the

pioneer steamboat captains of the river. They have been followed by many worthy successors, in whose charge millions of passengers have traveled in safety and comfort.

Some of the captains on the steamers in the thirties and forties were H. Moore of the *Olive Branch*, Fountain of the *Niagara* and C. Benton of the *William Penn*, on the Union Line; Captain Cochran of the *Chancellor Livingston*, T. Wiswall of the *James Kent*, S. Wiswall of the *Richmond* and Benton of the *Saratoga*, on the North River Line; Captain Bartholomew of the *Hudson*, on the Connecticut Line; R. G. Cruttenden of the *Constellation* and Wiswall of the *Constitution*, on the North River Association Line. Capt. D. Peck sailed the *Swift Sure* and Captain Seymour the *Commerce*, of the Steam Navigation Company; Captain Peck the *Henry Eekford* and Captain Drake the *Sun*, of the O. & D. Line; while Captain Sherman had the *Chief Justice Marshall* and Captain Fitch the *New London*, of the Troy Line.

Captain Cruttenden was one of the last survivors of this class and when in command of the old *Constellation* he used to boast he never lost a trip or a life, had made one thousand one hundred and sixty-two trips with the old boat and carried over 172,000 passengers.

Most of the early river captains reached a hearty old age. Captain Bunker, who ran the *Fulton* up the Hudson during the war of 1812, lived until he was



THE NORTH AMERICA
One of the fast boats of the "Thirties." Reproduced from a painting by James Bard, now owned
by Capt. Jacob Triupper

seventy-five years of age, dying in 1847, and must have rejoiced to note the great development in an industry in which he was a pioneer. Another veteran of the river, Capt. Samuel Wiswall, lived to be sixty-three years old and died in New York in 1836. He is buried in Hudson.

Among the river captains of 1847 were Capt. A. Gorham, commanding the *Troy*; Capt. H. J. Kellogg, the *Niagara*; Capt. W. W. Tupper, the *Columbia*; Capt. R. B. Macy, the *Empire*; Capt. W. H. Peck, the *Isaac Newton*; Capt. R. G. Cruttenden, the *Hendrik Hudson*; Capt. R. H. Furey, the *North America*; Capt. Thomas N. Hulse, the *South America*; Capt. G. O. Tupper, the *Alida*; Capt. A. DeGroot, the *Roger Williams*; Capt. J. S. Odell, the *Columbus*; Capt. Samuel Johnson, the *Thomas Powell*; Capt. Charles Halstead, the *Superior* and Capt. John Samuels, the *Emerald*.

Many odd characters were to be found among the old captains. Of one it is told he used to boast he paid one hundred dollars to bury his wife and it was worth every cent of it! He, however, was an exception to the generally good humored river captains and never came to the dignity of commanding a passenger boat. He was a mighty good navigator, however, and had the reputation of putting things through in spite of wind or weather.

Captain Houghton of the old *Rochester* was one of the

greatest characters among the old captains. He was familiarly known as "Pug" Houghton, his nose suggested the cognomen, and he was a great story-teller. He was a stage driver in Vermont when a younger man and some of his tales of the road were hair-raisers. He used to tell of frightening off some robbers at a wayside tavern with a brass candlestick which he held up as a pistol, and, as if to convince all doubters, he used to say, in the morning the heels of two boots were found on the doorsill, torn off the bold marauders footwear as the captain had jammed the door to upon them. "Pug" Houghton always had a knot of passengers about him on the river boats as he recounted his experiences on the high seas, though there were those who claimed he never sailed beyond Sandy Hook in all his life.

"Uncle" Daniel Drew, who had two steamboats, and a theological seminary in New Jersey named after him, was an able financier and a good business manager in general. He was greatly surprised on a certain occasion to find one of his captains taking a drink at the bar while the boat was running. The captain was equally surprised at being found at the bar by "Uncle" Daniel. Capt. ———— was, however, a good bluff and held his ground, talking business as he drank his whiskey and in the presence of the owner of the line planked down a quarter on the bar for the drink.

"What," said Mr. Drew to the captain, in sur-



THE RIP VAN WINKLE

Built in 1845 for the day line, but was used on the Delaware River and as a night boat on the Hudson until 1872 when she was so badly damaged in a collision as to be of no further use.

prise, "do you have to pay for your drinks on this boat?"

"Always," replied the captain, without the quiver of an eyelash. "Fact is," said he, "Mr. Drew, I find it the best means of interposing a most desirable restraint on natural tendencies."

"Uncle" Daniel left the captain quite satisfied he was a very moderate drinker, if he had to pay steam-boat prices for drinks, but had the bartender not sought out the captain and restored the quarter of a dollar before the end of that particular trip, the chances are ten to one he would have lost his job.

One of the best known river captains was Capt. A. L. Anderson who had the *Mary Powell* built for him and commanded her for years. She was not only the smartest boat on the river in her day, but has always been a "lucky" boat, never having met with a serious accident. She lost one of her smokestacks in a big blow in the Highlands on one of her trips, many years ago, but is said to have finished her trip on time. She was owned for years by the Anderson family, but was recently purchased by the Day Line. There is still a Captain Anderson on board of her, however. He is A. E. Anderson, a son of the original captain, and as he has been running the *Powell* for over thirty years himself, is in the veteran class.

Capt. S. J. Roe, who has commanded the *Rip Van Winkle*, *Drew*, *Dean Richmond* and *Adirondack* in his

day, is still living, hale and hearty, over eighty years of age, in Albany, N. Y. His memory goes back to the days of the *Swallow* in 1845, and he took a party of excursionists down the river in the *Belle* to view the wreck of the old boat. Captain Post, who ran the *St. John*, has been dead for a number of years and so has Capt. "Dave" Hitchcock who put the *Chauncey Vibbard* through by daylight and retained his popularity as a captain as long as he ran upon the river.

The captains alone should not be remembered of the great steamboat days of the thirties, forties and fifties. The times developed many engineers, men of resource and ingenuity, who made their boats jump through the water under the impulse of every pound of steam that could be crowded on the boilers, in the great efforts to make records for speed. Many of the older men, on the decline of steam navigation, following the opening of the railroads, took to the deep water business and became chief engineers on ocean steamships and it would be interesting, indeed, if one were able, to follow the old-timers of the starting bar in their wanderings from their river habitat.

CHAPTER VIII

FAST TIME ON THE RIVER

NO sooner had the *Clermont* made it possible to reduce the time of the journey to Albany to thirty-two hours, than the steamboat builders began to attempt to make a further reduction.

Each succeeding steamer cut down the time of the passage. In 1817 it had been reduced to eighteen hours and in 1826 the *Constellation* and *Constitution* had made the trip to Albany in fifteen hours. By 1836 a new boat, the *North America*, had cut it down to ten hours and the improvement went steadily on until the *Chauncey Vibbard*, in 1864, made it in an even seven hours, beginning and finishing the trip in daylight, which had long been the ambition of the steamboat captains. Now the new *Hendrick Hudson* of the Day Line leaves New York at 8.30 a. m., makes nine landings, arrives at Albany at 5.30 with the regularity of a railroad time table and could, if pushed, do a great deal better.

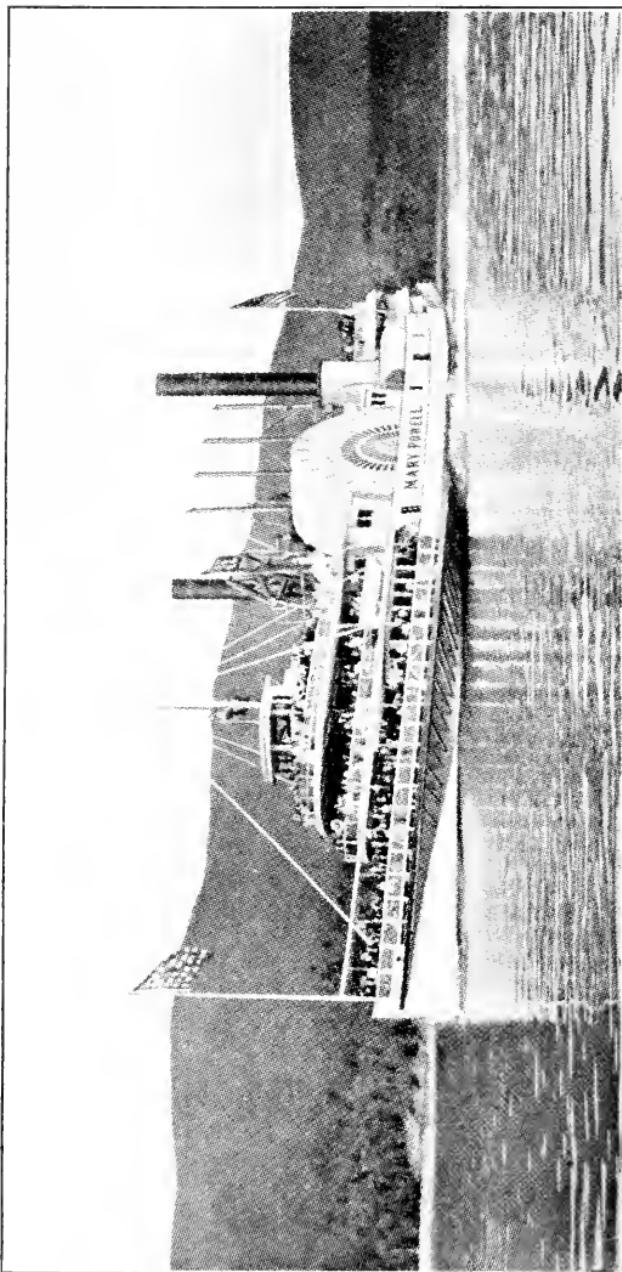
The improvement in time will be readily appreciated

by the appended statement of the performances of the old-timers on the run to Albany:

			hours	minutes
1807	<i>Clermont</i>	.	. . . .	32 —
1817	<i>Chancellor Livingston</i>	.	. . . .	18 —
1826	<i>Constellation</i>	.	. . . .	15 —
1836	<i>North America</i>	.	. . . .	10 —
1849	<i>Alida</i>	.	. . . .	7 45
1851	<i>New World</i>	.	. . . .	7 43
1852	<i>Francis Skiddy</i>	.	. . . .	7 30
1860	<i>Armenia</i>	.	. . . .	7 42
1862	<i>Daniel Drew</i>	.	. . . .	6 50
1864	<i>Chauncey Vibbard</i>	.	. . . .	6 42

The *Mary Powell*, built in 1861, many times reconstructed and improved and still running, was for years conceded to be the queen of the river steamers in point of speed. She averages twenty miles an hour at all times, and has been pushed to twenty-six miles.

In 1884, the steam yacht *Stiletto*, built entirely for speed and fresh from the hands of her builders, the Herreshoffs of Bristol, R. I., tried to wrest the laurels from the old boat and succeeded by a narrow margin. On June 10th in a race of thirty miles she beat the *Powell* by two miles, covering the distance in one hour and fifteen minutes. It was not a bad showing, however, for the old river queen and her owners have always claimed she could have done much better had she been put into first class condition for the race.



THE MARY POWELL.

Built in 1861, she was known as the "River Queen," and was for years the fastest boat on the Hudson

Similar claims were made for the *Stiletto*, her builders claiming twenty-seven miles an hour for their boat. The *Stiletto* set low in the water so as to present as little surface for wind resistance as possible. She was somewhat of the same type as the *Vamoose*, another boat built for speed in later years. Both were the forerunners in a degree of the motor boats now so popular.

This special form of construction had been attempted, however, many years before. Burden built a cigar-shaped boat which he called *Helen*. Though it was expected she would be very speedy, she turned out a failure and was soon abandoned.

In the attempt to turn out fast boats and cut down the time of the river, some boats with four smokestacks and as many boilers, with two engines and two walking beams were built. The *Erie* and *Champlain* were "four pipers," but they did not realize the expectations of their builders. Even at this late date the *Albany* and *New York* of the Day Line only boast of three smokestacks. The improvement in speed has been secured with more perfectly constructed machinery and feathering paddle wheels, than anything else.

The old captains were frequently given to speeding their boats, and many tales are told in the pilot houses and engine rooms to this day of the old craft that made sprints in order to hold the record of the smartest boat on the river.

When Hudson River captains raced their boats they did it for all they were worth. Trips that could be made with eighteen cords of wood and twenty-five pounds of steam, would call for twenty-five cords of wood and sixty pounds of steam, if the other boat was a good one and the race was at all close. The steam gauges were plugged and the safety valves were weighted down so that the boiler pressure frequently became threefold what it should be.

In the fall of 1836, the *Swallow* and the *Rochester* had a memorable race, starting from Jersey City at 4 p. m., November 8th, and it was a hot one. The boats were within a short distance from each other all the way up the river, with the tide against them. The *Swallow's* engine became disabled near Hudson and she slowed down for a few moments and then dashed ahead again, but the *Rochester* reached the Overslaugh Bar, five miles below Albany, first, in eight hours and fifty-seven minutes, and the *Swallow* in nine hours and two minutes, just five minutes behind her rival. Though the race was the *Rochester's* it was generally admitted that the *Swallow* was the better boat.

The *North America* and the *Champlain* were always in for a race whenever their sailing hours permitted of it, and each boat had its enthusiastic backers, for the passengers generally became as much interested in these river contests, as the captains themselves.

The *Columbia*, a new boat, made her appearance in

1849 and immediately demonstrated to the older craft on the river, she was to be reckoned with. Her spurts with the *North America* were among the exciting brushes of the period and she crowded the older boat to the rear, making the run to Hudson, where she belonged, in eight hours and a quarter.

The *Kosciusko* and *Telegraph* were always pushing one another for the record. Many times they tried conclusions and when a race between the two was on, it mattered not if a score or more passengers were waiting at one of the announced landings, the boats rushed by, leaving the hapless people on the dock, so great was the rivalry between the two captains. The *Telegraph* eventually proved the better boat and kept the record until a newer vessel sent the old speeder to the rear.

The rivalry for the speed record became so great between two of the boats, the *Oregon*, owned by George Law, and the *Cornelius Vanderbilt*, owned by "Commodore" Vanderbilt, then running on Long Island Sound, that a race for \$1,000 a side was arranged between them, which took place on the Hudson River on June 1, 1847. The *Vanderbilt* was a new boat. The race started at the Battery and both boats got away at eleven o'clock, a great throng of people being on hand to witness the contest. For thirty miles up the river the boats kept side by side, but the *Oregon* passed the *Vanderbilt* as she approached the stake

boat off Ossining and was half a length ahead at that point. In passing the *Vanderbilt*, the *Oregon* was bumped by her rival and damaged her wheelhouse considerably. On the way down the river the *Oregon*'s coal gave out, but the captain and crew resorted to tactics that had been followed before, in the days of exciting steamboat racing. The woodwork of the berths, chairs, benches, furniture of staterooms and everything else that would burn was put under the boilers to keep up steam. She finished the race at the Battery about twelve hundred feet ahead of the *Vanderbilt*, having covered the seventy miles in three hours and fifteen minutes with the tide against her going north and with her on the return. The owners of the *Oregon* got the \$1,000 stake and possibly expended more than that restoring the joiner work on their boat.

The *Alida* and the *Hendrik Hudson* had a great race from New York to Albany in 1849. The first named reached Albany at 2.55 p. m., having left New York at 7.00 a. m., made one landing and beat the *Hudson* by fifteen minutes, both boats having an ebb tide all the way up the river.

Captain DeGroot of the *Reindeer* would never admit there was a boat on the river that could pass him and he was frequently called upon to prove it, which he did to the discomfiture of his rivals. The *Henry Clay* was designed to beat her, but never did. The *New World*, with her enormous piston stroke of fifteen feet

which has never been equaled, though fourteen feet strokes were not uncommon, was thought to be a match for the *Reindeer*, and she proved to be, though Captain DeGroot would never admit it, always claiming something went wrong with the machinery when he found the other boat was pulling away from him.

The *St. John* wrested the laurels from the *Vanderbilt* in 1863 and in the same year the new day boat *Chauncey Vibbard* made Albany in seven and a half hours, which she cut down the year following to six hours and forty-two minutes.

Steamboat racing on the Hudson virtually came to an end in 1852, when the Steamboat Inspection Bill, passed by Congress, became a law. It was well racing was made unlawful, for it had developed recklessness and a disregard for the safety and convenience of passengers. Then, too, bursting boilers were of too frequent occurrence and there was good reason, though we are apt to smile at their fears with our experience in new and improved mechanical devices—for sensible people to prefer traveling on “safety barges” having the benefit of steam propulsion without sleeping above an overtaxed boiler.

The fear of bursting boilers was the one uppermost in the minds of the early steamboat travelers. An incident will illustrate the promptness with which the boat owners met all objections:

The steamboat *New London* was advertised to leave

that part of the pier opposite the Eagle Tavern, Albany, for New York, one afternoon at 4 o'clock. A prejudice existed at the time against iron boilers, which were thought to be unsafe. It was, therefore, advertised that the *New London* had a copper boiler, an overnight transformation said to have been accomplished by a liberal application of copper colored paint.

The steamboats in their day tried to do what the telegraph does for the newspapers to-day. In 1829 we read that the President's Message which was sent to Congress on Tuesday, December 8th, reached New York fifteen and one-half hours afterward and was rushed up the river on the steamer *Albany* and arrived at that city in time to be published on Thursday morning, which was an event considered to have been one of "unprecedented dispatch."

It will certainly pay you the next time you journey up the river to take note of the long low embankment extending out in the water, nearly a mile from the shore, at the point where the Palisades suddenly terminate as if cut down by some mighty hand. The narrow strip of land looks more like a breakwater than anything else, and close observation will show it is sadly in need of repair. It is now more of an obstruction to navigation than anything else, and should have been removed long ago.

The place is Piermont and it is the "pier" that extends such a great distance out in the river. The

"mont" or "mount" is at the shore end of the pier and if you have a pair of marine glasses with you, on looking well up on the hillside you will find a large yellow building that was once a hotel. Both the pier and the hotel are the silent witnesses of the busy, hustling times that once marked the place, but now long since gone.

Piermont was the eastern terminal in those days, of the Erie Railway and was the nearest possible point the road could get to New York City. The New Jersey State line reaches down to the Hudson about two miles south of Piermont. About the last place you can note in New York State below Piermont is Snedens Landing, a point of interest, however, for General Cornwallis landed there with six thousand British troops in 1776 and marched on Fort Lee further down on the Palisades.

When the Erie Railroad was built under a New York charter, New Jersey put up the bars against the new railway entering that State.

It was the talk those days that the old Camden and Amboy road controlled the entire railroad situation in New Jersey. It was certainly a powerful combination, which has since become incorporated in the Pennsylvania Railroad system. At any rate, it was powerful enough to make the Erie get to New York by way of Piermont. This was the reason the long pier was built; tracks laid upon it and the passenger trains run

out to a steamboat ferry landing. From this point all the passengers were carried to New York City by steamboats and the railroad attempted to overcome the serious handicap, by making the trips between Piermont and the city in the shortest time possible. The freight was lightered down the river.

It can readily be imagined what a scene of busy activity the old pier must have been in times past, though one will look in vain for any signs of life there now, with the exception of a few manufactoryes that have located at the shore end of the pier. The Piermont branch of the Erie is still in existence, and freight cars are brought down the steep grades to the river level at that point for the benefit of local shippers.

The old hotel on the hillside has been a school, a conservatory of music and a boarding-house since the busy days when it was a popular hostelry at which fashionable New Yorkers bound west stopped over night, so as to take the first morning trains, without being forced to leave the city at an inconveniently early hour on the Erie's fast steamboat express ferry from the foot of Duane Street.

CHAPTER IX

DISASTERS OF RIVER TRAVEL

ACCIDENTS have attended the navigation of the river. Since the introduction of steam, boats have sunk, burned and been in collision on many occasions. Frequently there was an attendant loss of life. Never, however, has there been such a disaster as that of the burning of the *General Slocum*, on the East River in broad daylight, June 15, 1904, when nine hundred and fifty-eight lives were lost and one hundred and seventy-five injured, or the more recent catastrophe of the Joy Liner *Larchmont*, on the Sound off Block Island, February 11, 1907. Then nearly two hundred souls perished in the icy waters, as the result of the collision between the steamer and the schooner *Henry Knowlton*.

Possibly the nearness of the shores on either side of the river, the more careful supervision of the boats by the operating lines, the watchfulness of the captains or indeed sailor's luck may account for the comparatively small loss that has attended the navigation

of the Hudson. From whatever cause the fact arises, it certainly is a matter of satisfaction to note the toll of the dead is comparatively small, when the years and number of passengers transported are taken into consideration.

Still the Hudson is a treacherous river to navigate in a fog and at all times there are shoals and rocks for the pilots to avoid. It requires an expert at the wheel to take a boat through the apparently land-locked turns and reaches at the Highlands. Much has been accomplished in later years by the Federal and State Governments erecting range marks on the shores, building lighthouses on the most dangerous points and deepening the channel by dykes above New Baltimore. Many a boat has gone aground on the bar below Albany and remained a prisoner there for hours, an experience to which the river traveler of to-day is seldom subjected.

The *Clermont* alone of the three earlier boats on the river, was continued long enough in the service as the *North River* to receive an honorable discharge by being "broken up." Both the *Car of Neptune* and the *Paragon* sank, the latter in 1825.

The *General Jackson* on a trip from Peekskill to New York exploded her boilers near Grassy Point and several passengers were killed. "Commodore" Vanderbilt's brother Jacob was her captain at the time.

The *North America* became a wreck when moored

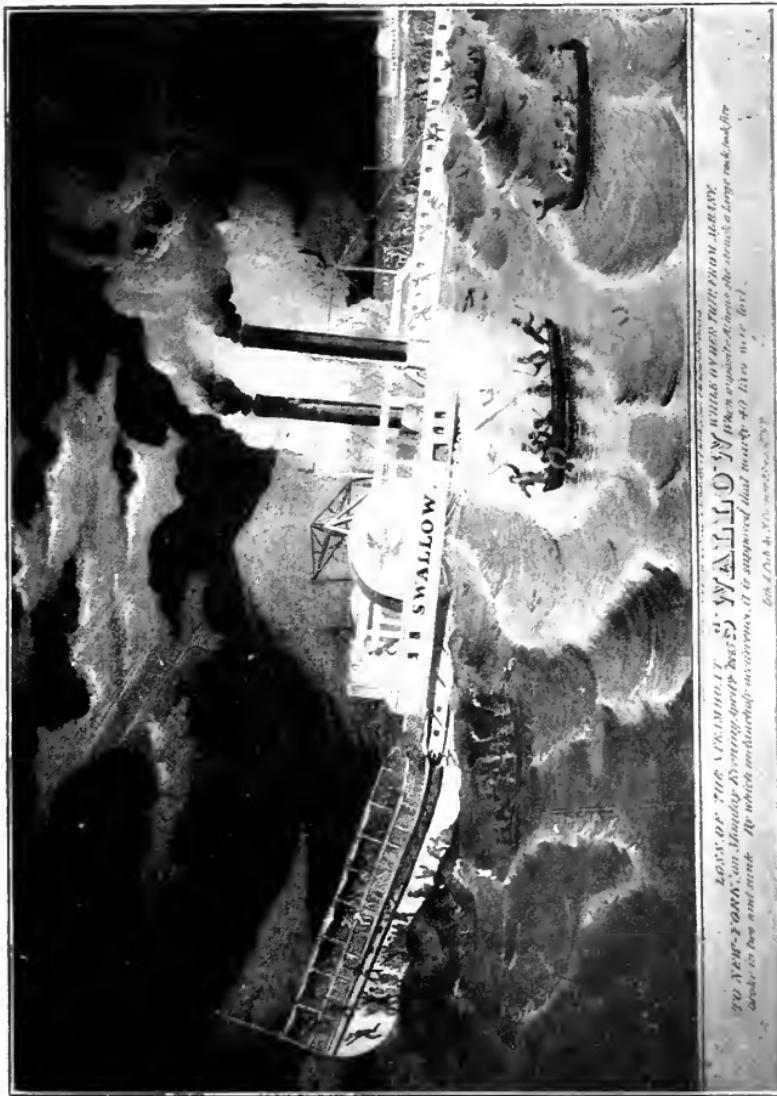
to her dock in Albany in the spring of 1839. She was carried down by the breaking up of the ice in the Island Creek. No lives were lost.

The steamboat *Swallow*, one of the most popular and speedy boats of her time, on her way down the river, in a snow squall, from Albany, on Monday evening, April 7, 1845, met with disaster. She was under command of Captain Squires and was known as a night boat. She left Albany in the evening and reached New York the next morning. When near Athens, which is nearly opposite from the city of Hudson, she struck a rock, took fire, broke in two and rapidly sank. There is little doubt but that she was racing with the *Express* and *Rochester*. The reporter of the *Hudson Rural Repository* who, with characteristic enterprise, was on the spot, in his account of the disaster says:

“On Monday evening, April 7th, the steamboat *Swallow*, Captain A. H. Squires, was on her passage from Albany to New York, and when opposite this city, in the Athens channel, ran upon a little, rocky island, broke in two, and in a few minutes sank. The alarm was immediately spread in Athens, and a large number of citizens soon rallied to the scene of disaster, and happily succeeded in rescuing many lives. Soon after the steamboats *Express* and *Rochester* came down and promptly rendered what assistance was in their power, taking many passengers with them to New

York. The *Swallow* had on board a large number of passengers, but the exact loss of life is at present unknown [the number lost proved to be about fifteen]. The night was exceedingly dark, with a heavy gale, snow and rain, and very cold. Our citizens are yet busy about the wreck."

The rocks on which the *Swallow* was wrecked made a little island formerly known as Noah's Brig, especially among the lumbermen, who ran rafts of logs and lumber down the river. It derived that name, according to the "History of Columbia County," from the following incident: "One night a large number of rafts were coming down the west channel, one of them being under the command of a man who was known among his comrades by his Christian name, 'Noah.' As the rafts neared this point Noah espied in the dim light a dark object riding upon the waters, which he at once decided to be a brig under sail, and as soon as he had approached near enough he hailed it, 'Brig ahoy!' No response. Again, in stentorian tone, his hail rang out upon the night air, but still no attention was paid, and the mysterious craft kept unswervingly to its course. This exasperated Noah, and his third hail was 'Brig ahoy! answer, or I'll run you down!' and, as no reply was given, true to his word he did run down the island; two trees standing widely apart having deceived him as to its character. Probably neither Noah's brig nor his raft sustained serious injury, but



THE WRECK OF THE SWALLOW, APRIL 7, 1848

Reproduced from an old lithographic print

LOSS OF THE VENICE SPRINGS SWALLOW
ON NEW YORK'S STONY ISLAND SPRINGS, APRIL 7, 1848.
The vessel was bound for New York, having been
despatched from Boston on March 20, 1848.
She had been at sea about 10 days, when she
was overtaken by a violent gale, which
caused her to run aground on the rocks of
Stony Island, where she was dashed to
pieces. The crew were saved by a small
boat, which had been sent out in search
of them.

the poor *Swallow* met a more cruel fate. A large portion of the island has been taken away, and the rock material was used in constructing the embankments of the canal through the middle ground."

The place since the eventful wreck has always been called the Swallow Rocks.

The author's father, Ira Buckman, purchased the old wreck of the *Swallow*, hauled the material seven miles inland and from it built a fine two-story house at Valatia, N. Y. It is on the old Albany Post Road, is yet standing in a good state of preservation and is still known as the "Swallow House."

The *Victory* sank in 1845. She had always belied her name and was a hoodoo from the first: she was built in 1828 and owned largely in Albany. Her engines were too powerful and she was always meeting with accidents. This same company built and put on their line the *DeWitt Clinton* which finally became a tow barge, but the enterprise was never a success and many Albanians lost all they put into the scheme.

The *Empire* was run into by the schooner *Noah Brown* in Newburgh Bay, May 18, 1849, and twenty-four lives were lost.

The loss of the *Henry Clay* on July 28, 1852, was one of the notable and fatal disasters of the river. She had almost reached New York on her way from Albany when she was discovered to be on fire. Her captain headed her for the shore at Riverdale and ran her hard

aground, but unfortunately most of the passengers were at the stern, which was in deep water and imprisoned by the flames. There was a wild panic, the terror stricken men and women fighting for possession of the life preservers and struggling with one another even after landing in the water. Sixty lives were lost, including a number of well-known New Yorkers, among the number being Miss Hawthorne, a sister of Nathaniel Hawthorne, and the calamity cast a gloom over the entire city. The shore of the river at the place of the accident was crowded for days with people seeking to recover the bodies of the dead.

The *Reindeer*, one of the larger and popular boats, which bore Jenny Lind in triumph to Albany when making her successful trip through the country, met with disaster September 4, 1852. The boilers of the boat burst near Bristol, forty miles below Albany. Six persons were killed and twenty-five others died afterwards of their injuries.

These two accidents, following so closely one after the other, resulted in a public agitation that secured the enactment of the Steamboat Inspection Bill of that year. Though the captain of the *Clay* and the owners insisted there had been no racing, the passengers claimed there had;—the coroner's jury found she had been racing all the way down the river with the *Armenia* and the disaster was without doubt the result of the woodwork catching fire from the overheated boilers.

The *New World* sank off the Stuyvesant shore on July 4, 1861, on her way from New York to Albany. It was in the morning and daylight and fortunately no lives were lost. She was raised and repaired at New York and was used during the Civil War, then in progress, as a hospital ship, being stationed in the vicinity of West Point. Her engines were placed in a new night boat for the People's Line, called the *St. John*.

The *Oregon* was sunk in collision with the *City of Boston*, at New York, October 22, 1863, and in June, 1864, the *Berkshire* burned near Hyde Park with loss of life.

The *Isaac Newton*, on her up-river trip on the night of December 5, 1863, exploded her starboard boiler opposite Fort Washington Point, after which she caught fire and was completely destroyed. Seventeen persons were scalded, nine of whom died.

The *Franeis Skiddy*, one of the four pipers with as many boilers, built for speed in 1851, came to grief on her down trip November 5, 1864. She hit a rock near Staatsburg while trying to avoid a large tow and proved to be so bad a wreck that she was never put again in service. Her engines were taken out and for the most part placed in the *Dean Richmond*, which was new in 1865, and they are still doing duty in that boat. Though the *Skiddy* never fulfilled the expectations of her owners as a speeder, she, for a long period, accom-

plished what none of the present boats are called upon to do: she made a round trip between Albany and New York every twenty-four hours.

The *St. John* burst one of her boilers October 29, 1865, a few miles below Albany, and fifteen lives were lost, most of them being passengers. She was repaired and ran for twenty years, one of the most popular boats on the river, finally being destroyed by fire while laid up in winter quarters at the foot of Canal street, New York, in February, 1885.

The *St. John* rammed and sank the *Catskill* several years ago off West Sixty-fifth street, New York, and the *Onteora* not long since ran high and dry in a brick-yard above Newburgh, but was hauled off without much damage.

One of the latest serious accidents to befall the river boats was on October 13, 1906, when the Troy Line boat *Saratoga* ran down the *Adirondack* near Tivoli.

The *Saratoga* was so badly injured she dropped one of her boilers in the river and it has never been recovered. The *Adirondack* had much of her forward work carried away, but continued to run for the balance of the season. Each boat lost a man. The *Saratoga* ended her career on the river then and there.

The *City of Troy* was discovered to be on fire after leaving Yonkers on the evening of April 5, 1907. She had aboard about one hundred passengers and a valuable cargo of freight. Captain Brüder and his crew

made a desperate effort to subdue the fire which originated in the galley in the hold, but without success, so he effected a landing at the Gould Dock at Ardsley. All the panic-stricken passengers were safely landed, but the entire cargo, including several horses, was lost, as the vessel, after setting fire to the dock, burned to the water's edge and was a total loss. She was built in 1876, but several times reconstructed. She was two hundred and eighty feet long, thirty-eight feet beam, and her engines were 1,600 horse power.

CHAPTER X

FLOATING TOWNS

AMONG the most picturesque sights on the Hudson are its floating towns. No more fitting term can be used to designate the long lines of canal boats lashed together four and five abreast and strung out for nearly a half mile, being towed down the river, so slowly that the movement is hardly discernible.

The tows, which are made up at the basin above Albany where the Erie Canal enters the Hudson, look very much like floating towns, presenting the regularity of blocks of buildings, with lanes of open water between, not unlike streets in appearance.

These clusters of "canalers," hay barges and ice boats, though of a motley appearance, are always interesting. Home life in its every phase can be noted, for the "canaler's" boat is largely his world. His family is domiciled on the craft from the opening to the close of navigation, and the boat is often maintained as the home when in winter quarters.

On one the captain's wife may be seen washing

clothes just outside her cabin door and on another the entire wash hanging up to dry; red flannel shirts of the men flutter in the breeze, and on the same lines is the finest of snowy under-linen of both male and female variety. Little shirts and "petties" also indicate the presence of children, and if you watch for them you will find them on some of the boats, playing with children from the other craft in the tow or running over the decks with their dogs at such a rate, one wonders they do not fall overboard. Some of the cabin roofs are fitted up with gay canvas awnings, hammocks and swings. Bright hued geraniums and other flowers in boxes in front of the cabin windows add to the picture. Sometimes a group of men and women will be seen on one of the boats, spending a pleasant hour eating and listening to the lively music of a concertina or guitar, for it is while the boats are being slowly towed down or up the river, that the "canalers" have a rest and the opportunity to relieve the rather dull monotony of their lives, by these social amenities.

Because these people of the canal boats live lives apart and different from others, do not imagine for a moment there is not to be found among them men and women who are quite the equal of the average men and women met with elsewhere. Especially was this the fact in the years that followed shortly after the opening of the Erie Canal.

Many young men on the farms and in the mid-

state towns through the Mohawk Valley, married and single, saw in the new waterway opportunities to make a fortune and to travel to the great cities. They invested in canal boats and became both owners and captains. They carried grain and products of all kinds to New York and went back loaded with manufactured goods for the up-state farmers. Some men ran passenger packets on the canal, and the Red Bird and other lines carried many between Albany and Buffalo.

Many of the boats, those carrying wheat especially—for it was before the day of railroads with their huge grain elevators at the terminals—were kept particularly clean and were provided with roomy cabins in the stern, wonderfully contrived for convenience, in which the captain, his wife and sometimes the children lived comfortably. The mules that towed the boats on the canal were quartered in a stable built in the bow of the boat.

The owners of this great inland marine, that sprang into existence on the opening of the Erie Canal, had as many different ideas as to the naming of their boats as come to the minds of parents naming their first born. Some were fancy, some just homely family names after the owner's wife or daughter; others were those of heroes and even mythological gods and goddesses were not forgotten. It is on this account if you ever get near enough to closely inspect these river tows, you are apt to find the *Gladiator* of Spencerport bound



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A PACKET BOAT ON THE ERIE CANAL.

Passengers usually traveled by a Hudson River steamboat from New York to Albany and thence to Buffalo by a packet through the canal. Reproduced from an original painting by permission of C. Klackner, N. Y.

more firmly with two-inch hawsers to *Elizabeth Jones* of Fort Ann, than the marital ties of many couples bind them to-day. *General George Washington* is apt to be found keeping company with *Polly*, all the way down the river and if two late stragglers join the tow and are hitched on behind all the rest, it is like as not to prove to be *Minerva* and *Jim* enjoying, as it were, for a few hours, only too brief, a *tête-à-tête* by themselves.

This towing of canal boats on the Hudson constitutes a large and profitable business in its own class. It is in the hands of regularly organized companies and the rates are now so thoroughly established that "cut-throating" is a thing of the past. It was not always so, for competition in the towing business was quite as fierce as it was in the freight and passenger business. The time was, when a canal boat owner could get a tow all the way from Albany to New York for five dollars, but the average fee when competition was not cutting all profit from the business was more likely to be fifteen.

Some of the old-time companies engaged in the business was the Schuyler Towing Co. of Albany, the Austin Towing Co., the Ronan Co. and the Swift Sure Towing Co. of New York. Most of the canal boats rendezvoused in New York at the basin at Coenties Slip, on the East River, and it is at this point that the up-river tows are still made up.

The steamers that pulled these immense tows up and down the river were for the most part old passenger boats, rebuilt and adapted for the purpose by the removal of most of their upper works, saloons and staterooms. The *Vanderbilt*, *Niagara*, *Norwich*, *Alida*, *Cayuga*, *Syracuse*, *Connecticut* and many others have become tow boats, and if you have ever seen an old cattle boat, the *John Stevens*, knocking about the river, loaded with livestock for the abattoirs, you will have recognized in many of her lines those of the fine passenger boat she was in the fifties.

It required nearly a week for one of these tows to make the trip down the river, the progress was so slow. Generally sixty to eighty boats made up a good sized tow, but Capt. Harvey Temple went up the river one time, with a broom on the flagstaff of the old *Connecticut*, and pulling one hundred and eight canal boats behind her, which made a new record in the size of towing fleets, and so far as the author is informed, still is the largest.

These flotillas of canal boats, not so large now as in the former days, are all witnesses of the great importance of the vast system of inland waterways which helped to make undisputed New York's title to being the Empire State. It has nearly one thousand miles of canals within its borders, the construction and maintenance of which has cost upward of a hundred million dollars.

Of these the Erie Canal, three hundred and sixty-one miles in length, is by far the most important, connecting the Great Lakes with the tidewater of the Hudson. Next in importance is the Champlain Canal and Glens Falls Feeder which connects the Hudson with Lake Champlain. These and the other canals have in the past played a great part in the development of the State. The cities on the line of the Erie Canal—Schenectady, Amsterdam, Utica, Rome, Little Falls, Syracuse and Rochester—owe much to the waterway that brought commerce to their doors and placed them in ready communication with the rest of the country.

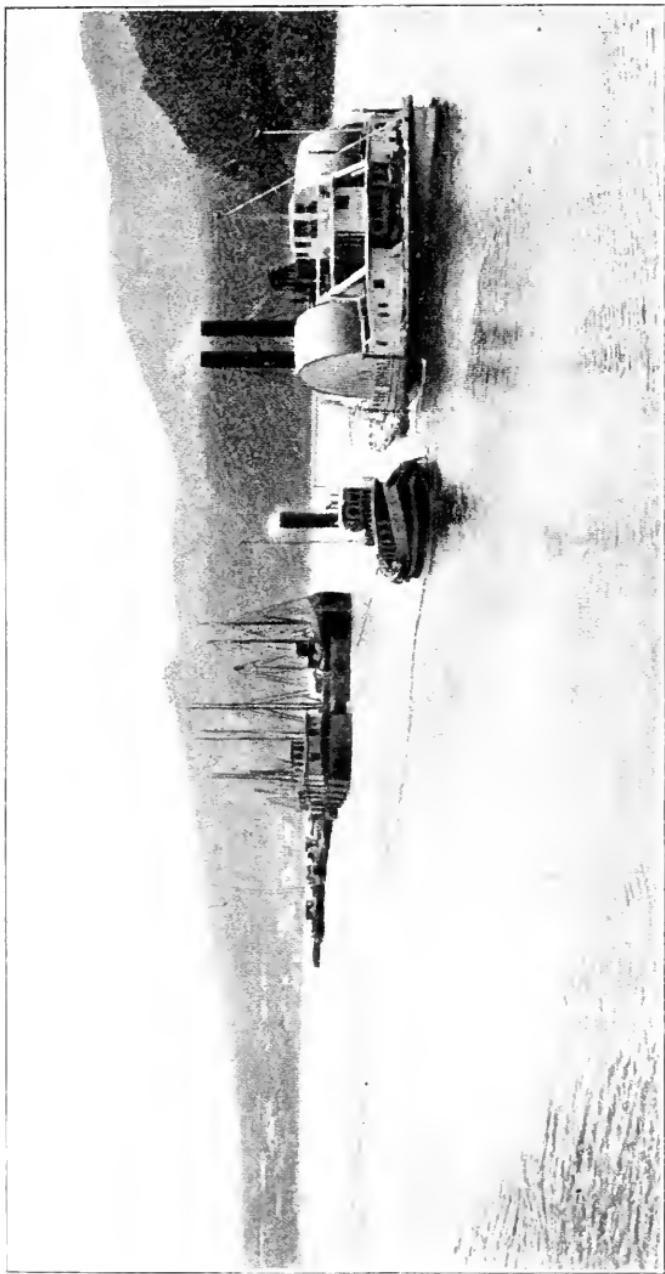
Call to mind if you can the many towns in the center of the State, far from the waters of the lakes, rivers or ocean, which have an aqueous termination or suggestiveness in their names and you will realize in a small degree the importance of what the great canal system meant to places that would have been to-day little more than straggling hamlets on dusty country cross roads. With the ocean and the Great Lakes many miles distant you will find in inland New York, Lockport, Gasport, Middleport, Shelby Basin, Eagle Harbor, Brockport, Adams Basin, Spencerport, Fairport, Waynesport, Port Gilson, Weedsport, Port Byron and other "ports," all witnesses to the developing power of the canal system of the State.

The work of building the Erie Canal was begun

under an act of the Legislature, July 4, 1817, at Rome, in the presence of Gov. De Witt Clinton, through whose earnest endeavors, exerted at all times and in the face of much opposition, the great improvement was urged to a successful completion. The Governor's opponents always referred to the vast undertaking in those days as "Clinton's Big Ditch." The plans provided for a canal forty feet wide at the top, eighteen feet at the bottom, with a depth of at least four feet of water, which was calculated to accommodate boats of one hundred tons burden. The work had progressed so far that on October 22, 1819, the first boat was able to make the trip from Rome to Utica with Governor Clinton, Chancellor Livingston and other distinguished men aboard.

It was not until October 26, 1825, however, after eight years of prodigious labor, that the Erie and Champlain Canals were opened and the Hudson was the scene of such a maritime pageant that the people of that period had never dreamed of.

On the date named a flotilla of canal boats, all new and gaily decorated, started from Buffalo, on Lake Erie, for New York City. The news of the departure was communicated to the latter city by the booming of cannon located along the line and the signal thus traveled across the entire State and down the Hudson in one hour and twenty minutes. When the boats reached Albany they were received by a great throng



A HU DSON RIVER TOW
Showing canal boats and ice barges on the way to New York City



of people, Governor Clinton, the Canal Commissioners and all the State officials. There never was such a ringing of bells and booming of cannon in the place before. The people who had made the trip from Buffalo were escorted to the capitol in a triumphal procession and welcomed by Mayor Hone, of New York City, on behalf of the people of the metropolis.

On November fifth, at five o'clock in the morning, the canal boat packets, convoyed by the *Chancellor Livingston*, with Governor Clinton and distinguished guests on board the *Young Lion of the West* and the *Seneca Chief*, reached New York and were welcomed by the New York Common Council, which met the fleet on board the steamboat *Washington*. Every vessel in the harbor was gaily decorated with flags, the church bells rang and cannon saluted as the naval procession rounded the Battery and sailed up the East River as far as the Brooklyn Navy Yard. There other vessels joined the fleet, which turned and sailed to Sandy Hook where the schooner *Dolphin* had been anchored.

Here took place the most unique feature of the celebration. As the boats circled round the schooner Governor Clinton poured a keg of the fresh water of Lake Erie into the salt water of the Atlantic and the marriage of the Great Lakes and the ocean was announced as having been duly solemnized. As another token of what the great improvement meant to the civilized world Dr. Samuel L. Mitchell poured into

the ocean, waters collected by him from the Thames, Seine, Rhine, Danube, Amazon, La Plata, Orinoco, Ganges, Indus, Gambia, Nile, Mississippi and Columbia Rivers.

On returning to the city the distinguished State officials were met at the Battery with a procession nearly four miles long, which marched through the principal streets. At night there was a great display of fireworks, the city was brilliantly illuminated and altogether it was the greatest celebration old New York had ever had up to that time.

The Erie Canal having demonstrated its great usefulness to the State was enlarged in 1854 to seventy feet at the surface, fifty-six at the bottom, with a depth of seven feet.

At the present time a third enlargement and improvement is being made by straightening the course so as to afford a larger capacity to float barges of one thousand tons burden. The people carried the proposition to spend one hundred and one million dollars on the last enlargement, by a large majority at a general election, though many of the best informed maintain the usefulness of canals is at an end and the more modern method of railroad transportation has rendered them obsolete. The people, however, have generally favored maintaining the canals, as the most effectual check they could impose on railroad monopolies.

CHAPTER XI

BARGE TRAVEL ON THE RIVER

A NOTHER feature of river life in the early days of steam navigation was the barges that carried passengers up and down the Hudson. These generally hailed from some of the small towns on the upper river that could not supply traffic enough to support a steamboat service.

At first the barge was, however, conceived to afford passengers the means of travel by steam without being subjected to the dangers of being upon a steamboat, with the attendant possibilities of bursting boilers and other fearful accidents from breaking machinery. The first to appear were the *Lady Clinton* and the *Lady Van Rensselaer* and they were called "safety barges."

The barges were boats with a main and upper deck almost as long and commodious as a steamer. The main deck was fitted up with a cabin, extending in some instances the whole length of the boat. There was a long saloon, with "state" or sleeping rooms arranged along on either side. Windows looked out on

the water and doorways opened in on the cabin. There was generally a long table in the saloon at which meals were served for fifty cents each to the passengers. The captain of the barge always sat at the head of the table and helped make the meal hour quite an event of the trip. These barges were towed by one of the regular passenger boats up to their home town, where they would be dropped.

The "safety barges" were quite popular in their day, for they carried many passengers who were enthusiastic over the pleasure derived from a trip on the water on boats of this character.

Thomas L. McKenney, who was attached to the Department of the Interior at Washington and one of the Commissioners who with Lewis Cass negotiated the treaty with the Northwest Indians, made a barge journey up the Hudson in June, 1826, on his way to the Great Lakes. He has left us such a vivid description of these barges and the delights of the trip, the reader will surely pardon a somewhat longer quotation than usual:

"I left New York, as it was my intention to do, in the *Lady Clinton*, yesterday morning, at nine o'clock. It was the first time I had ever seen one of these barges. I must say I was struck with the admirable invention, and with the extent and variety and perfection of the accommodations. You have seen steamboats. This barge, in all respects except breadth of beam and

machinery, resembles the finest you ever did see. It took me the first half hour after getting on board to walk through this floating palace. It certainly exceeds anything I have ever yet seen in all that enters into the composition of safety and comfort. Indeed there is a splendor too in the ornamental parts which is very striking and as if the inventive genius of the owners was apprehensive that the ear might grow jealous of the eye that organ had been provided for also, with a fine band of music. I have heard some question the security of this barge, by saying her buoyancy and great elevation above the surface of the water rendered her liable to turn over. But I doubt whether if she or her sister, the *Lady Van Rensselaer*, were to glide up and down the North River for a century such an occurrence would happen. Were they visitants of the sea the swells of the ocean might rock them over, but never in my opinion will the North River roll so as to occasion such a disaster.

"This beautiful barge is towed by the *Commerce*, an unusually fine steamboat, and of great power. The connection is by means of two pieces of timber some six feet long. They are fastened to either side of the bow of the barge, and uniting in the form of a pair of compasses, the upper or joint part receives a bolt of iron which rises out of the stern of the *Commerce*. The connection parts work on swivels, hence none of the motion of the steamboat is communicated to the

barge. Communication is had between the two by means of a movable platform some two and a half feet wide, with hand rails on either side. Openings are made in the stern of the *Commerce* and in the bow of the barge in which the platform rests. . . .

"Some of the advantages which the barge possesses over the steamboat are, in the security from the effects of a bursted boiler—freedom from the heat and steam and from the smell of grease and the kitchen, and from the jar occasioned by the machinery and the enlarged accommodations—the whole being set apart for eating and sleeping and walking. The cabin in which we dined is below and is the same in which the gentlemen sleep; and one hundred and eighty persons can sit down at once and each have elbow room sufficient for all the purposes of figuring with the knife and fork in all the graces of which these two instruments are susceptible. At the termination of this immense dining apartment and towards the bow is a bar, most sumptuously supplied with all that can be desired by the most fastidious and thirsty. The berths occupy the entire sides of this vast room; they are curtained in such way as to afford retirement in dressing and undressing; there being brass rods on which curtains are projected and these are thrown out at night. In the day the curtains hang close to the berths as is usual. Next above this are the ladies' cabin and apartments—staterooms rather—furnished in the most splendid style,

and in which a lady has all the retirement and comfort which the delicacy and tenderness of her sex requires.

"Over the bar and upon this middle apartment or tier is an apartment where the gentlemen dress, shave and read. All around this second story, it being, I should judge, not over two-thirds the width of the boat, and resting on the middle deck, is a fine walk with settees where you can sit when you please and lounge. Then comes, and over all, the grand promenade, with an awning when the sun or rain requires it over the whole.

"It is not possible for New York to furnish in her best hotels a better dinner than we sat down to yesterday; nor in a better style of preparation. I suppose our company numbered one hundred. The captain is highly qualified, no less by his masterly knowledge of his duty than by his gentlemanly courtesy, for so splendid a charge; and the attendants appeared to be the best. Taken altogether I question whether the world ever witnessed anything so perfect in all that relates to the accommodation and comfort and pleasure of passengers."

Evidently Mr. McKenney enjoyed his barge trip up the Hudson, and it is quite likely that he traveled on a pass.

Some of the passenger barges that plied for years on the river were the *Newburgh*, *Susquehanna* and *Charles Spear*. Their towing steamer was the *Highlander* owned by the Powell family, which gave the Hudson

two well-known steamers, the *Thomas* and *Mary Powell*. The first named, however, never equaled the latter in point of speed. The firm of T. & J. Powell of Newburgh ran a line of sloops on the river as early at 1802; and it was from that beginning the present daily evening steamboat service to that city came eventually into existence, the owners of the Homer Ramsdell Line (now included in the Central Hudson Co.) being grandsons of Thomas Powell.

It is believed the propeller type of river boat was especially built to make it more feasible to tow these barges, as the side wheel boats made it very noisy, the revolving paddles splashing the water at the side of the barges all night long. With the propeller wheel at the stern this difficulty, as well as much of the motion, was overcome.

Traveling by barge was not always the height of enjoyment and comfort described by the enthusiastic traveler just quoted. Progress was slow and the boats latterly carried a varied cargo of farm products, baled hay and live stock. Calves and lambs bound for the city slaughter houses, and horses for the New York street car lines—the Third Avenue line had three thousand horses in its stables alone—frequently made such a chorus of “bahing,” bleating and neighing that rendered futile any attempt to sleep in the “stateroom” in the “grand saloon” on the upper deck.

Most, if not all the passenger barges have been taken

from the river, and after being altered, first, to make excursion boats for Sunday school and social club picnics around the cities, finally became hay boats to carry that staple product of the Hudson Valley farmers to the New York market. Doubtless there are grandfathers and grandmothers who may read this, who will be able to call to mind rare midsummer holidays spent aboard the "elegant and commodious barges" *William Myers*, *Walter Sands* or the *Caledonia*, in dancing and merry-making, as they were slowly towed to some popular picnic ground near the great city.

Possibly the best conception of what the old passenger barges were like may be found in the floating hospital of St. John's Guild, the *Helen C. Juilliard*, which in the summer months can be seen almost daily being towed up the river or down the bay crowded with mothers and babies from the East Side tenements and affording them rare opportunities to be in the sunshine and breathe the fresh air. The boat is provided with every accommodation in the way of cabin accessories, having been built especially for the purpose. The floating hospital is considered one of the most beneficent charities of the great city.

CHAPTER XII

THE STEAMBOATS OF TO-DAY

THIERE is none of the old time competition for the passenger traffic on the river to-day. It has been adjusted between the several lines. Indeed some kind of a traffic arrangement is made between the boats and railroads. The character of the boats and the accommodations have been improved and most all the craft now operating in the passenger service are new, presenting every luxury possible to secure in boat travel.

The principal steamboat companies operating on the river at present are the People's Line night boats to Albany, the Day Line to Albany, the Citizens' Line to Troy, the Catskill Night Line, the Hudson Night Line, the Newburgh Night Line and the Central Hudson Company's Lines to several of the cities on the river south of Albany.

Passengers on the boats travel in comfort and safety, for the days of steamboat racing are past and the cheap rate competition, which over crowded the boats, exists no longer. To-day the journey up and down the

river is made on modern boats, the passengers entertained with delightful music from stringed orchestras and at night with searchlight exhibitions. These are indeed beautiful, the cultivated hillsides, handsome villas of the wealthy and rugged grandeur of the rocky Highlands being brought out in a series of wonderful pictures as the boats, twinkling with a thousand electric lights of their own, move slowly along the river. It is not only the passengers that enjoy these nightly illuminations of unusual beauty. The dwellers on the river banks know just when to expect them and almost set their clocks, say their prayers and go to bed after the night boat has passed.

Some of the newer boats now in service on the river are the *Homer Ramsdell*, the *Newburgh*, the *Onateora*, the *Albany*, *New York* and *Hendrick Hudson*, of the Day Line, the *Adirondack* and *C. W. Morse*, of the Night Line to Albany.

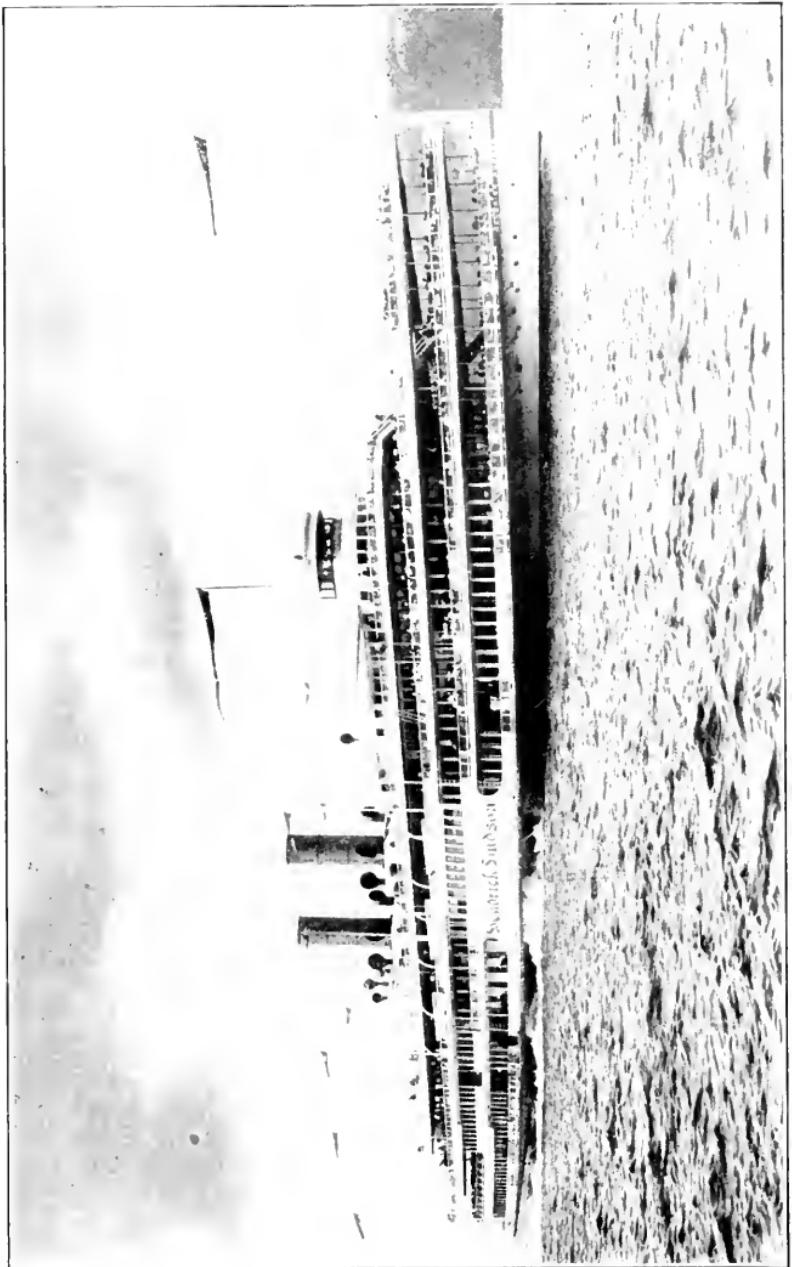
Of these the *Hudson* and *Morse* are the newest and are of a type so distinctly in advance of the others, an extended note of them will be of interest.

The *Hendrick Hudson* is the second steamer of that name that has plied the river. They were probably named Hendrick instead of Henry because of some confusion arising from the English discoverer of the river having come to this country in a Dutch vessel and under the Dutch flag. From whatever cause it arises, it is the fact that half of the time Hudson is referred

to as Hendrick and it no doubt is a more picturesque rendering of the name.

The *Hendrick Hudson* was built on the banks of the Hudson at Newburgh and launched March 31, 1906. She is three hundred and ninety feet long, forty-three feet beam and eighty-two feet over the guards. She draws but eight feet of water. Her hull is of steel divided into seven water-tight compartments, with two collision bulkheads. She has five decks, three of which are for the exclusive use of passengers, of which she can carry five thousand, no space being reserved for freight. The engine is of the three cylinder compound variety of five thousand five hundred horse power with a seven foot stroke. The paddle wheels are twenty-four feet in diameter, of the feathering type, on a shaft twenty-two inches in diameter, of open hearth carbon steel. One of the new features of this boat is the fact that the crank shaft is below the main deck line, made possible by the small diameter of the paddle wheels, but adding greatly to the comfort and convenience of the passengers. No sacrifice of speed has been made by this improvement as the *Hudson* can make twenty-three miles an hour easily.

The boat is magnificently furnished in hard woods and handsomely decorated. The dining room on the main deck aft and surrounded with large plate glass windows, is finished in mahogany, as are the saloons on the upper decks.



THE HENDRIK HUDSON

Placed in service in 1907 by the Hudson River Day Line. The original boat of that name, the Hendrik Hudson, was built in 1845.



A grand staircase leads to a large observation room on the upper deck, over which is a handsome stained glass dome. In the forward saloon is a suspended band stand and so situated that it is estimated the eoneerts given by the orchestra, which are a great feature on the boats of this line, can be heard by at least three thousand seated passengers. There are a number of private drawing rooms furnished in Louis XVI, Japanese, French-Empire, Dutch and Colonial styles and a large writing room in polished teakwood. Everywhere throughout the boat are large plate glass windows, affording passengers an opportunity to view the beautiful scenery of the river. She is steered by steam, has her own electric light equipment and in short an attempt has been made to supply every comfort and convenience that the most exacting passengers could desire.

A new Day Line boat, eompanion to the *Hudson*, is about to be laid down on the ways in Marvel's Yards, at Newburgh, and is to be finished in time for the summer traffic in 1909. She will be named the *Robert Fulton*. The boat will be 415 feet long, 85 feet beam, 62 feet from her keel to the top of the pilot house. The engines will be 6,500 horse power and the boat will be licensed to carry 6,000 passengers.

The *C. W. Morse* is one of the longest side wheel steamers afloat. She is four hundred and twenty-seven feet over all, fifty feet six inches beam, but ninety feet

over guards. The load draft is but nine feet. The hull is of steel, divided in eight water-tight compartments with collision bulkheads. She has four steel masts. On the lower deck are accommodations for fireman and deckhands and a saloon with berths for passengers, besides room for the boilers and dynamos for supplying two thousand five hundred electric lights all through the boat and the thirty-six inch search light on the pilot house. The kitchens, barrooms and pantries are also on this deck.

The main deck forward is reserved for freight, but aft, the entire room is a handsomely fitted up lobby and magnificently appointed dining room, in richly carved mahogany woodwork and lighted with two hundred and twenty-five electric lights, held in green bronze fixtures. This room will seat three hundred comfortably. The main staircase leads from the lobby to the grand saloon, which is twenty-eight feet high with a domed ceiling in white and gold and surrounded with two galleries having highly ornamented guard rails of mahogany and bronze. Staterooms with brass bedsteads and parlors *de luxe* with bath rooms and toilets can be entered from the saloon direct or communicating corridors, richly carpeted. There is also a passenger elevator on the boat. In all there are four hundred and fifty of these sleeping apartments furnished in varying degrees of elegance. She is licensed to carry two thousand passengers.

The boat is four stories, or decks, high and the floor of the pilot house is forty feet above water level. She is steered by steam and every movement of the vessel can be directed from the pilot house. The engines, which are of the vertical type, are four thousand five hundred horse power, cylinder eighty-one inches in diameter, twelve foot stroke, and the boilers are four in number and are thirty-three feet long, nine feet six inches in diameter and there are two smokestacks. The paddle wheels are of the feathering type variety, thirty feet in diameter, and the paddle wheel shaft is twenty-four inches in diameter. It was a clever piece of marine engineering to produce so huge a steamer, when the draught of the boat was restricted to nine feet loaded on account of the shallow water near Albany, but the designer appears to have wrestled most successfully with the difficult problem with which he had to contend.

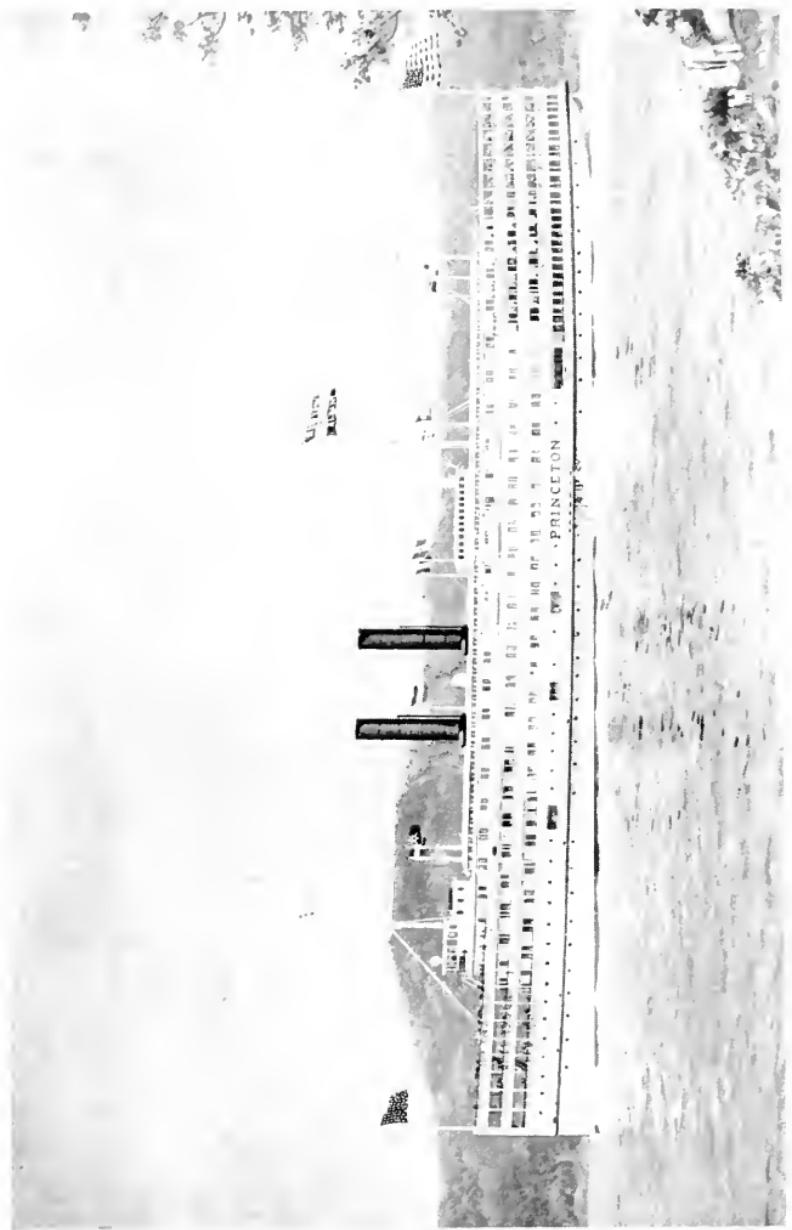
Another type of modern steamboat, differing entirely from those described, is the *Asbury Park*. She is of the propeller type. Though not designed especially for the Hudson, she leaves daily from the North River side of the city of New York for Sandy Hook and is frequently seen by the travelers on the river. The Sandy Hook route is operated by the Central Railroad of New Jersey and is for the special benefit of the patrons of the shore resorts on the Jersey coast. All of the boats of this line, the *Monmouth* and *Sandy Hook*,

are propellers and very speedy. The latest addition to the fleet, the *Asbury Park*, built by the Cramps and put on in 1903, is the fastest on the line. She is three hundred and seven feet long, forty-two feet beam and fifty-one feet over her guards. The hull is steel with six water-tight compartments, and forward and aft there are collision bulkheads. She draws but eleven feet of water on account of the shoals inside the Hook. Her appointments for the accommodation of passengers—she is licensed to carry two thousand one hundred and fifty-nine—are of the most complete character. Her grand saloon, one hundred and ninety-five feet long, is finished in quartered oak, and large plate glass windows afford the traveler most delightful views of the shipping in river and bay. There are nineteen state-rooms and four drawing rooms are also provided. She has two engines of the four cylinder, triple type, of six thousand horse power and the boat has developed a speed of twenty and five one-hundredths knots. This means she can make the run to the Atlantic Highlands at Sandy Hook, a distance of eighteen miles, in one hour and five minutes with the regularity of a railroad time-table. Indeed she runs in close connection with railroad trains that carry the passengers from the landing point to Sea Girt, Long Branch, Ocean Grove and other popular resorts.

Two new boats, one for the People's Line and the other for the Citizen's Line to be built on the

Illustrated September 31, 1905, by the People's Publishing Company New York and Albany

The Penitentiary



general lines of the *Morse*, have been contracted for, both of which will be ready for the summer season of 1908. They will have steel hulls, and the larger one of the two, will be four hundred and forty feet long having over five hundred staterooms and accommodations for two thousand passengers. Every convenience will be provided and they are expected to be the most luxurious river craft afloat.

The name of the new People's Line boat will be the *Princeton* and the Citizen's Line new boat will be named the *Knickerbocker* repeating the name of a popular steamer in the passenger service on the river in 1844-5.

CHAPTER XIII

HUDSON-FULTON MEMORIALS

THE names of Henry Hudson and Robert Fulton will be borne in large letters on the pages of history, so long as the river that was the scene of their great achievements finds its way to the sea. The Tercentennial of Hudson's discovery and the Centennial of Fulton's successful application of steam to navigation will furnish opportunities, however, for New York to erect such memorials as will suitably honor the memories of the two men. It is indeed strange that neither has heretofore been honored in any way, unless an exception is noted on account of the panel in the Astor bronze doors in Trinity Church, which represents Hudson on the deck of the *Half Moon* off Manhattan Island, and the tablet on Fulton's grave.

Two important committees are at work on the proposition and they include in their membership, some of the best known men in the country.

The scheme to suitably celebrate the Tercentennial of Hudson's discovery took its first tangible shape on

February 15, 1905, when Mr. Robert Roosevelt, uncle of President Roosevelt, invited a number of gentlemen to meet with him and the subject was discussed. The attendants at that conference represented most of the patriotic and historical societies of the city of New York. It was determined to secure the creation of a commission under act of the Legislature to carry out the object of the conference. This was done and December 5, 1905, the Hudson Tercentenary Joint Committee was duly organized at the New York City Hall.

The New York Board of Trade and Transportation, and others, acting quite independently, having determined that some celebration should mark the Centenary of Steam Navigation, on July 13, 1905, organized the Robert Fulton Memorial Association with Gen. Fred D. Grant as president, who has since been succeeded by Mr. Cornelius Vanderbilt, a great-grandson of the "Commodore" who broke the river monopoly.

It did not take long after these two separate movements had been inaugurated, for those at the head of each to appreciate the fact there was such a general tendency of scope and purpose as to suggest a consolidation of endeavor, though the actual anniversaries fall in 1907 and 1909 respectively. A special legislative act, Chapter 325 of the Laws of 1906, was passed with a view of co-ordinating the two propositions; General

Stewart L. Woodford, ex-United States Minister to Spain, has been elected president of the joint commission and the success of the celebration is assured.

It is the purpose of the combined associations to cause suitable memorials to be erected to Hudson and Fulton, to be followed with a joint celebration on the waters of the Hudson that will bring together, possibly, the greatest number and finest types of steam craft ever assembled. The entire week beginning September 20th, 1909, will be given over to land and water parades and commemorative exercises in the schools and by the Historical Societies.

The Hudson Memorial Committee has already advanced its plans in a large measure toward completion. These provide for an imposing Hudson Memorial Bridge to span Spuyten Duyvil Creek, connecting the Boulevard system of Manhattan Island with the parkways of Westchester County. There has already been appropriated \$1,000,000 by the City of New York to make a beginning, and the total cost of the contemplated improvement is likely to approximate \$5,000,000.

The Memorial Bridge, as planned, is to span the Spuyten Duyvil Creek at a height of one hundred and seventy feet. The central steel span of the bridge will be eight hundred and twenty-five feet in length, the largest in the world with a single exception, that being the steel arch bridge over the gorge at Niagara, which

is fifteen feet longer. From abutment to abutment the length of the bridge will be two thousand five hundred feet. The stone viaduct approaches are to be carried on a series of masonry arches. The structure will be one hundred feet wide, affording two sidewalks, each eighteen feet wide, and a central roadway of sixty feet. No attempt will be made at elaborate decoration on the structure itself. Its grace of outline and massiveness are relied upon to produce an appreciation of its solidity and impressiveness, but parklike effects at the approaches will be introduced and a knoll some thirty-five feet in height at the southern end will be retained and it is expected to crown this with some suitable monument to Hudson. The city is not expected, in the plans of the commission, to defray the cost of this memorial as it is believed that a popular subscription will produce sufficient funds to insure its erection by the time the bridge has been constructed and opened for the use of the public.

The views that will be obtained from the bridge when completed will be among the finest that can be secured anywhere near the great city. Immediately below will be the Harlem River and the ship canal to the east. To the west will lie the Hudson, showing a stretch of water several miles in length, teeming with river craft, and beyond, the Palisades on the New Jersey shore. To the north the eye will take in the heights above Riverdale and the wooded hills of Van Cortlandt Park, and

to the south, extended views of what is rapidly becoming the greatest city of the world. The panorama that will spread in every direction before the visitors to the Memorial Bridge, will present pictures that will linger long in the memory of those who shall live to see the work successfully completed.

The Fulton Monument Association is planning to erect a Monumental Water Gate on the Hudson River shore front at West 114th and 116th streets and Riverside Drive, harmonizing and adding to the dignity and beauty of the tomb of General Grant and the buildings of Columbia University that crown the hillside at that point. Several well-known architects are now at work on the plan for this Monumental Water Gate, but the design that will be finally selected has not as yet been determined. Every endeavor will be made, however, to decide upon the plan in time to put the corner stone of the monument in place on November 14, 1907, with appropriate ceremonies. The date named is the birthday of Robert Fulton and the year marks the first century of the successful application of steam to navigation. It is the purpose in building the Water Gate not only to honor the genius of Fulton, but at the same time to provide a suitable landing place for distinguished visitors who reach the city in ships. Nothing of the kind has yet been provided. The beautiful park at the Battery might well have been reserved for such purposes instead of having been given over to elevated



ROBERT FULTON

From a photograph of the statue on the
Fulton Ferry House in Brooklyn

railroad structures, landing places for emigrants, ferry slips and docks for excursion steamers.

A third proposition taking tangible shape and form is the establishment of a Hudson-Fulton Memorial Park at Verplancks Point, forty miles up the river and directly opposite historic Stony Point, which has already been secured for a Memorial Park. It is proposed to locate on Verplancks Point some form of museum and exhibition that will foster a lively appreciation of all the points of interest that are associated with the history and achievements on the river. The State of New York has already been asked to pass a law appropriating \$125,000 for this purpose.

The proposed park is to include many historical points and will do much to preserve the scenic beauties of the river. The site of Fort Fayette and the remains of a shore battery that did service in the Revolution, the old King's ferry landing leading to the Stony Point battlefield on the opposite shore, the site of Washington's headquarters and the camp ground of the allied American and French troops, under Washington and Rochambeau, in 1782, are all included in the area which it is sought to acquire. Hudson anchored the *Half Moon* on his trip up the river in 1609 off the shore of Verplancks Point; so there will be added interest to the Memorial Park on that account.

CHAPTER XIV

HENRY HUDSON'S RIVER

WHEN Henry Hudson, an Englishman commanding a Dutch vessel and crew, sailed up the Hudson, he thought he was going to China. Like Columbus and all the early navigators to the New World, he was in quest of the same fabled Northwest Passage. This was to make a short cut to India and the Orient and had been sought for years, but which will never be realized until Uncle Sam finishes the Panama Canal.

Hudson had made two previous trips under English auspices and failed. The third attempt was made under the Dutch flag and in a vessel, a very small one, almost a yacht, called the *Half Moon*.

The beautiful Bay of New York was first entered by Hudson, who rounded Sandy Hook August 3, 1609, and kept on his course to the north past what is now Manhattan Island and up what is now the Hudson River.

Here surely was a great stream of water, deep enough

to indicate a strait, with the walls of the Palisades suggesting the gigantic erosions of the glacial age, witnesses of the mighty forces of ice and water that swept down from the northward and made the Hudson Valley what it is.

Is there any wonder Hudson and his crew rejoiced as they sailed northward, satisfied that the mariner's goal for hundreds of years, the Northwest Passage, had at last been found? Every mile of the way seemed to add to the certainty. The broad expanse of water three and a half miles wide at Tarrytown, now the Tappan Zee (Sea), the still wider Haverstraw Bay all hastened the mariner and his men to the open ocean they believed must lie ahead. Then came the Highlands, the Dunderberg and Anthony's Nose, clothed with their primeval forests, looking like veritable headland capes guarding the secrets of the undiscovered country and waters beyond. What a journey of mysterious enchantment and of unexpected developments this first trip of the *Half Moon* up the Hudson must have afforded!

It was not until Hudson began to detect the shoaling water near the site of the present city of Hudson, his dreams of the Northwest Passage began to fade and the fact he was rapidly approaching the head of a great river dawned upon him. He pushed on, however, to just below where Albany, the capital of the State, now stands on the western bank and from that point sent

small boats still further up the river to ascertain if there was any way out. They returned with the disappointing statement that the stream became rapidly shallow and that they would have to return to the sea, one hundred and fifty miles away at the mouth of the river they had been exploring for so many days.

Some of Hudson's men evidently left the river in their small boat expedition and went up the Mohawk, for to-day there is a hamlet midway on the peninsula made by the two rivers, called Half Moon, which, tradition says, is so called because some of the first explorers from the little Dutch vessel visited the place when endeavoring to ascertain the limitations of Henry Hudson's great discovery.

The commander of the *Half Moon* spent several days in visiting the friendly Indians living on the shores. After retracing his voyage and having an unfortunate fight with some Indians, he again stood out to sea on October 4th, and never returned to the beautiful river he had discovered, which was to be known by his name for all time and preserve for him a place in American history.

Hudson kept a journal of the many points he had noticed about his discovery. He called it the Great River and also the River of the Mountains. Some of his old crew returned the following year and soon the Dutch began to settle on Manhattan Island. They called it the River Mauritus, after Prince Maurice of

Nassau. It was also named the North River to distinguish it from the South or Delaware River, but it came to be called, and will always be known as the Hudson, after the man who located it on the map of the New World.

An unkind fate appears to have followed Hudson to the close of his life. His crew mutinied on the return voyage and when he reached Dartmouth, England, in November, the Government detained both him and his ship on the pretext that an Englishman had no right to be in the employ of foreign nations, making discoveries that would not redound to the credit of England. She paid but little attention, however, to the Dutchman's colony at New Amsterdam until years afterward, when the importance of the river and the settlement on Manhattan Island had become manifest. Hudson was not permitted to return to Holland and the crew of the *Half Moon* was not allowed to carry the news of the discovery to those who had sent her on her voyage, until the following July.

The spring of 1610 witnessed Hudson's departure from England on his last voyage, in the *Discoverie*, and this time in the employ of the Muscovy Company. He was still seeking the Northwest Passage when he entered the great sheet of water surrounded by desolate shores, which still bears the name of its discoverer, Hudson's Bay. But the crew mutinied and Hudson, his son and seven men were put into a small boat and

told to shift for themselves. Undoubtedly the great navigator and his companions met an unmerited fate on the stormy waters of the bay, for they were never heard of again.

The people in every land love their rivers. In some countries they are sacred. In others they bring fertility and wealth to the lovely valleys through which they flow. Their praises are sung in the poetry of the people and told of in story. When, as is often the case, they form the boundaries between foreign States, nations have plunged into war in order that the free passage of these great natural waterways might be maintained.

To none has been given a more beautiful and useful stream than that which sweeps its majestic course from the forests of the Adirondacks, past the cities that line its shores, through the rocky Highlands and by the parapetted Palisades, until it mingles its waters with those of the bay in front of the great metropolis, the very gateway through which by far the largest influx of the wealth of the nation, namely, its people, have reached the New World.

A river three hundred and twenty miles in length, one-half of which is open to unobstructed navigation by sail and steam for the larger boats, is a great asset in the building of a state. The Hudson has had much to do with making New York the Empire



HENDRIK HUDSON ON THE HALF MOON OFF MANHATTAN ISLAND, SEPTEMBER 11, 1609.

From a photograph of a panel in the John Jacob Astor Memorial Doors, Trinity Church, New York City

State and the city at its outlet the metropolis of the country.

From the first the Hudson played a most important part in the colonization of America. When the young colonies had grown strong and asserted their freedom and the War of Independence was on, with what solicitous care did Washington and his generals fight to maintain the Hudson Valley. They were fully alive to the supreme necessity of keeping Burgoyne's forces in the north from making any coalition with those in the south, under Howe and Clinton.

The British commanders also realized the advantage of the control of the Hudson and planned to secure it. Every vantage point along the Hudson was fortified by the Americans. Fort Washington on Manhattan Island and Fort Lee opposite, Stony Point and its fortifications, Fort Montgomery and the redoubts at various places along the shore, make the river one of rare historical interest. It was on the Hudson the patriots built their fire rafts, to float down on the British ships and it was at West Point the great chain was stretched across the stream, to obstruct any passage of the river the enemy might attempt to make.

The surrender of Burgoyne at Saratoga after defeats in two battles at Benis Heights in 1777 and the recapture of Stony and Verplancks Points in 1779, from the British, only made the enemy more determined than ever to control the river and led up to that base

attempt of Clinton to secure through Benedict Arnold's perfidy, what he had failed to accomplish by the fair means of assault, the occupation of West Point and the key to the whole situation.

What an absorbing chapter of American history this treason of Arnold and the sacrifice of André makes and how the recollection of it all comes to one, as he wends his way through the beautiful Highlands and views the handsome buildings that now crown the bluff, in which the future defenders of the nation are being educated in the arts of war.

Indian legends, Dutch Sprookje, the romance of real life and the tales of fiction hover over nearly every mile of the river's course from its source in the mountains to its outlet in the great ocean.

Indian Head, a noble pinnacle of rock in the Palisades, was a veritable watch tower for the red men, from which they detected the approach of their foes. But, alas! the ravages of the stone contractors with their crushers have ruined its former rugged beauty.

The broad expanse of the Tappan Zee brings to mind the story of the hapless Rambout and his phantom ship, the *Flying Dutchman*. "Sunny Side," the home of Washington Irving, on the eastern shore at Irvington, is suggestive of the headless Horseman of Sleepy Hollow, which is just above Tarrytown, and where Irving lies buried beside a quaint old church, the bricks

in which were imported from Holland two centuries ago by the pious Dutchmen.

Bold Hook Mountain, another point of attack by the voracious stone contractor, whose picturesque beauty some public-spirited citizens are seeking to preserve from further spoliation, marks the northern limitation of the Tappan Zee. This headland was the Verdrietig (tedious) Hœck of the first Dutch navigators and so called because it remained so long in sight and took so many tacks to round on their trips up the river.

Once around the Hook, traverse "Haverstroo" Bay, passing the scene of Mad Anthony Waynes' attack at Stony Point, you are soon well in the midst of the most beautiful scenery. Dunderberg and Anthony's Nose, a mile or two beyond, form the portals to this enchanting section of the river whose culminating beauty is at West Point from which Crow's Nest, Storm King, Cloud Rest and Breakneck Ridge are all in the superb panorama.

Further north the "Highlands" recede from the river. To the east are the Berkshires, to the west are the Catskills and the haunts of Rip Van Winkle.

These are the river stretches and those above, that have brought from the pens of Washington Irving, Fitz Green Halleck, Charles F. Hoffman, N. P. Willis, Joseph Rodman Drake and Fenimore Cooper, some of their choicest contributions to English literature and induced

APPENDIX

APPENDIX I

THE CLERMONT'S FIRST REGISTRY*

No. 108.

Enrollment in conformity to an Act of the Congress of the United States of America entitled "An Act for enrolling and licensing ships or vessels to be employed in the coasting trade and fisheries, and for regulating the same."

Robert R. Livingston, of Clermont,
Columbia County, State of New York,

having taken and subscribed to the oath required by the said Act and having sworn that he, together with Robert Fulton, of the City of New York, are citizens of the United States, and sole owners of the ship or vessel called the *North River Steamboat of Clermont*, whereof Samuel Wiswall is at present master, and as he hath sworn he is a citizen of the United States, and that the said ship or vessel was built in the City of New York, in the year 1807, as per enrollment 173 issued at this port on the 3d. And Peter A. Schenck, Surveyor of the Port, having certified that day of September, 1807, now given up, the vessel being enlarged, the said ship or vessel has one deck and two masts, and that her length is 149 ft.; breadth, 17 ft. 11 in.; depth, 7 ft., and that she measures 182 48-95 tons. That she is a square-sterned boat, has square tuck; no quarter galleries and no figurehead. Hands and Seals, May 14, 1808.

* Filed in the New York Custom House after her enlargement, 1808.

II

EARLY STEAMBOAT ADVERTISEMENTS

The first newspaper advertisement of passenger service by steamboat is the following announcement of the times of departure and the rates of fare on the *Clermont*:

THE PUBLIC IS INFORMED HOW TO TAKE PASSAGE ON THE
CLERMONT

"Sept. 2nd, 1807.

"The North River Steamboat will leave Paulus Hook ferry on Friday, 4th of September, at 6 in the morning, and arrive at Albany on Saturday in the afternoon. Provisions, good berths, and accommodations are provided.

"The charge to each passenger as follows:

"To Newburg.....	3	Dolls—Time,	14 hours.
" Poughkeepsie.....	4	" — "	17 "
" Esopus	4½	" — "	20 "
" Hudson.....	5	" — "	30 "
" Albany.....	7	" — "	36 "

"For places apply to Wm. Vandervoort, No 48 Courtland Street, on the corner of Greenwich Street."

The following is believed to be the second steamboat advertisement to appear. It furnished much more information to the public as to the accommodations provided for passengers by this new mode of transportation:

STEAMBOAT

"For the Information of the Public.

"The Steamboat will leave New York for Albany every Saturday afternoon exactly at 6 o'clock, and will pass

West Point	about	4	o'clock	Sunday morning.
Newburg	"	7	"	" "
Poughkeepsie	"	11	"	" "
Esopus	"	2	"	in the afternoon.
Red Hook	"	4	"	" "
Catskill	"	7	"	" evening.
Hudson	"	9	"	" "

"She will leave Albany for New York every Wednesday morning exactly 8 o'clock, and pass—

Hudson	about	3	o'clock	in the afternoon.
Esopus	"	8	"	" evening.
Poughkeepsie	"	12	"	at night.
Newburg	"	4	"	Thursday morning.
West Point	"	7	"	" "

"As the time at which the boat may arrive at the different places above mentioned may vary an hour more or less, according to the advantage or disadvantage of wind and tide, those who wish to come on board will see the necessity of being on the spot an hour before the time. Persons wishing to come on board from any other landing than those here specified, can calculate the time the boat will pass, and be ready on her arrival.

"Innkeepers or boatmen, who bring passengers on board or take them ashore from any part of the river, will be allowed one shilling for each person.

Price of the passage—from New York.

To West Point.....	\$2.50
“ Newburg.....	3.00
“ Poughkeepsie.....	3.50
“ Esopus.....	4.00
“ Red Hook.....	4.50
“ Hudson.....	5.00
“ Albany	7.00

From Albany.

To Hudson.....	\$2.00
“ Red Hook.....	3.00
“ Esopus	3.50
“ Poughkeepsie.....	4.00
“ Newburg and West Point.....	4.50
“ New York.....	7.00

“ All the passengers are to pay at the rate of \$1.00 for every twenty miles, and half a dollar for every meal they may take.

“ Children from 1 to 5 years of age to pay half price, provided they sleep two in a berth, and whole price for each one who requests to occupy a whole berth.

“ Servants, who pay two-thirds price, are entitled to a berth; they pay half price if they do not have a berth.

“ Every passenger paying full price is allowed 60 pounds of baggage; if less than whole price, 40 pounds. They are to pay at the rate of 3 cents per pound for surplus baggage. Storekeepers, who wish to carry light and valuable merchandise, can be accommodated on paying 3 cents a pound.

“ Passengers will breakfast before they come aboard. Din-

ner will be served up exactly at 1 o'clock; tea, with meats, which is also supper, at 8 o'clock in the evening; and breakfast at 9 o'clock in the morning. No one has a claim on the steward for victuals at any other time."

III

THE FIRST SUCCESSFUL TORPEDO

ROBERT FULTON'S DESCRIPTION OF HOW HE DESTROYED THE BRIG DOROTHEA IN WALMER ROADS, ENGLAND

"To convince Mr. Pitt that a vessel could be destroyed by the explosion of a torpedo under her bottom," writes Mr. Fulton, "a strong-built Danish brig, the *Dorothea*, burthen two hundred tons, was anchored in Walmer Roads, near Deal, and within a mile of Walmer Castle, the then residence of Mr. Pitt. Two boats, each with eight men, commanded by Lieutenant Robinson, were put under my direction. I prepared two empty torpedoes in such a manner that each was only from two to three pounds specifically heavier than salt water and so suspended them that they hung fifteen feet under water.

"They were then tied one to each end of a small rope eighty feet long. Thus arranged, and the brig drawing twelve feet of water, the fourteenth day of October was spent in practice. Each boat having a torpedo in the stern, they started from the shore about a mile above the brig and rowed down toward her; the uniting line of the torpedoes being stretched to its full extent, the two boats were distant from each other about seventy feet; thus they approached in such

a manner that one boat kept the larboard, the other the starboard side of the brig in view.

"So long as the connecting line of the torpedo passed the buoy of the brig they were thrown into the water and carried on by the tide until the connecting line showed the brig's cable; the tide then drove them under her body. The experiment being repeated several times taught the men how to act, and proved to my satisfaction that when properly placed on the tide the torpedoes would invariably go under the bottom of the vessel."

Fulton continued to the final stage of his experiment and filled one of the torpedoes with 180 pounds of powder and set its clockwork to eighteen minutes. The experiment began on October 15, 1805, at five o'clock in the afternoon.

"At forty minutes past four," says Fulton, "the boats rode toward the brig and the torpedoes were thrown into the water, the tide carried them, as before described, under the bottom of the brig, where, at the expiration of eighteen minutes, the explosion appeared to raise her bodily about six feet. She separated in the middle, and the two ends went down.

"In twenty seconds nothing was to be seen of her, except floating fragments; the pumps and foremast were blown out of her, the fore-topsail yard was thrown up to the cross trees, the four chain plates with their boats were torn from her sides, the mizzen chain plates and shrouds, being stronger than those of the foremast, or the shelf being more forward than aft, the mizzen mast was broken off in two places; these discoveries were made by means of the pieces which were found afloat."

IV

THE FIRST ENGINEER OF THE CLERMONT

"Robert Fulton's chief engineer was Paul A. Sabbaton, who supervised the building of all of the Fulton engines built in this country up to the time of Fulton's death. Who the first engineer of the *Clermont* on her maiden voyage was we do not know, and can only quote an interesting item in connection therewith which appeared in the columns of *The Nautical Gazette* under date of Saturday, July 29, 1871, as follows: 'On Monday morning, Charles Dyke, 85 years of age, died in East New York, at the residence of his son-in-law, William E. Smith. Mr. Dyke was born on the 13th day of June, 1786, and in his earlier years followed the trade of a carpenter. He was at one time carpenter on the stage of the old Park Theatre. Having a natural talent for engineering, however, he turned his attention to that business, and soon became an expert. In 1807 Mr. Dyke was engaged as assistant engineer on Robert Fulton's steamer *Clermont*, on her first trip to Albany. The chief engineer was a Scotchman, and on the arrival of the boat at the point of destination, he celebrated the event by a rousing spree, the result of which was that Fulton discharged him, and he promoted Mr. Dyke to his position. When the Fulton Ferry Line was first established, Mr. Dyke was engineer of the first boat. He also engineered the first steamer down the Ohio and Mississippi rivers to New Orleans, and ran Vanderbilt's boats to Perth Amboy, when the present Commodore was a captain on his own craft. On one of his trips to New Orleans, with ord-

nance and ammunition for Gen. Jackson, in 1814, Mr. Dyke and the crew were pressed into service. They fought gallantly in the defense of that city. Mr. Dyke received a wound in the leg, and he bore the scar to the day of his death.' "

Nautical Gazette.

V

THE ONLY KNOWN STATUE OF FULTON

"The statue of Fulton, which was ordered about a year ago by the Union Ferry Company, was this morning conveyed from the atelier of Messrs. M. J. Seelig & Co., sculptors and founders, Maujer street, Williamsburgh, and placed in the niche designated for it in front of the new ferryhouse.

"The statue is ten feet six inches high, modeled by Buberl, from a picture of Fulton, by Jarvis, which formerly belonged to Cadwallader C. Colden, his biographer, and which was subsequently given by Mrs. Colden to the late Dr. Vinton, in the possession of whose family it now remains. This appears to be the only portrait of Fulton in existence. And Mr. Pierrepont, the Chairman of the Committee to whom the Ferry Company intrusted the duty of obtaining the statue, had great difficulty in tracing this one. Fulton is represented leaning on the model of the *Nassau*, the first steam ferryboat placed upon the Fulton Ferry. He is dressed in the ordinary dress of the period, say 1815, high-collared coat, tights, and Hessian boot with tassels. A cloak is thrown over his shoulders. The face wears a look of intense thought, but there is something of the artistic dream in the expression; for it is remarkable that Fulton,

like Morse, was originally an artist, and America owes to two brethren of the brush the two applications of steam and electricity which have revolutionized all our ideas of travel, of space, of mechanical possibility. There is grace in the lines of the statue and in the disposition of the few shadows, which implies considerable original talent, and a great deal of conscientious study on the part of the artist. The material of which it is cast is zinc, and this has been painted a light stone color. It weighs about 2,300 pounds. It is a fine work of art.

"Great credit is due to Mr. Pierrepont, who first suggested the work, and has seen it successfully executed."

Brooklyn Eagle, 1873.

VI

JOHN FITCH'S EXPERIMENT

HE TELLS HOW HE HOPED TO MAKE STEAM NAVIGATION POSSIBLE WITH HUGE OARS MOVED BY MACHINERY

"*To the Editor of the Columbian Magazine:*

"SIR, Philad., Dec. 8, 1786.

"The reason of my so long deferring to give you a description of the *Steam-boat*, has been in some measure owing to the complication of the works, and an apprehension that a number of drafts would be necessary, in order to shew the powers of the machine as clearly as you would wish. But as I have not been able to hand you herewith such drafts, I can

only give you the general principles.—It is, in several parts, similar to the late improved steam-engines in Europe, though there are some alterations—our cylinder is to be horizontal, and the steam to work with equal force at each end. The mode by which we obtain (what I take the liberty of terming) a vacuum, is, we believe, entirely new; as is also the method of letting the water into it, and throwing it off against the atmosphere without any friction. It is expected, that the engine, which is a 12 inch cylinder, will move with a clear force of 11 or 12 ewt. after the frictions are deducted; this force is to act against a wheel of 18 inches diameter. The piston is to move about three feet, and each vibration of the piston gives the axis about 40 evolutions. Each evolution of the axis moves 12 oars or paddles $5\frac{1}{2}$ feet (which work perpendicularly, and are represented by the stroke of the paddle of a canoe). As 6 of the paddles are raised from the water, 6 more are entered, and the two sets of paddles make their strokes of about 11 feet in each evolution. The cranks of the axis act upon the paddles about $\frac{1}{3}$ of their length from the lower end, on which part of the oar the whole force of the axis is applied. Our engine is placed in the boat about $\frac{1}{2}$ from the stem, and both the action and re-action turn the wheel the same way.

“With the most perfect respect, sir, I beg leave to subscribe myself

“Your very humble servant,
“JOHN FITCH.”

PROMINENT HUDSON RIVER STEAMBOATS

NAME	BUILT	CONSTRUCTED BY	AT	GROSS TONS	DIMENSIONS L. B. D.	EL
CEREMONY	1807	Charles Brown	New York	133	133' x 18' x 7'	Rou
CAR OF NEPTUNE	1808	do	do	295	175' x 24' x 8'	Rou
PARAGON	1811	do	do	331	173' x 27' x 9'	Rou
HOPE	1811	do	do	280	173' x 27' x 9'	Rou
PIPE FLY	1812	Charles Brown	New York	118	100' x 19' x 7'	Rou
LADY RICHMOND	1813	do	do	370	112' x 27' x 7'	Rou
OLIVE BRANCH	1815	do	do	295	122' x 30'	Rou
CHANCELLOR LIVINGSTON	1816	Henry Eckford	New York	495	157' x 33 $\frac{1}{2}$ ' x 10'	Jame
UNITED STATES	1821	J. Williams	do	180	110'	J. Bl
JAMES KENT	1823	Blossom, Smith & Dimon	do	364	110' x 18'	John
CONSTITUTION	1825	Brown & Bell	do	275	145' x 27'	John
CONSTITUTION	1825	do	do	275	119' x 27'	John
COMMERCE	1825	C. Berch	Brooklyn	371	130' x 24' x 8 $\frac{1}{2}$ '	James
SWIFT SURE	1825	do	do	265	130' x 24' x 8 $\frac{1}{2}$ '	James
NEW PHILADELPHIA	1826	do	Philadelphia	300	170' x 24'	John
INDEPENDENCE	1827	Brown & Bell	New York	368	148' x 26'	Novel
ALBANY	1827	J. Vaughn	Philadelphia	298	212' x 26' x 9'	West
NORTH AMERICA	1827	William Capes	New York	497	214' x 30' x 8'	West
VICTORY	1827	M. Kenyon	Albany	290	.....	West
DE WITT CLINTON	1828	do	do	571	233' x 28' x 10'	West
OHIO	1829	do	do	412	192' x 30'	....
NOVELTY	1830	Chauncey Goodrich	Hyde Park	450	165' x 24' x 9'	Novel
ERIE	1832	Brown & Bell	New York	471	180' x 28' x 9'	West
CHAMPLAIN	1832	do	do	471	180' x 28' x 9'	West
WESTCHESTER	1832	Smith & Dimon	New York	230	134' x 23' x 8'	....
ROBERT L. STEVENS	1835	do	Kingston	298	175' x 24'	....
HIGHLANDER	1835	Lawrence & Sneden	New York	313	175' x 24' x 8'	West
SWALLOW	1836	William Capes	Brooklyn	426	224' x 22' x 8 $\frac{1}{2}$'	....
ROCHESTER	1836	Smith & Dimon	New York	491	269' x 24' x 8 $\frac{1}{2}$'	....
UTICA	1837	William Capes	Brooklyn	340	180' x 21 $\frac{1}{2}$ ' x 8 $\frac{1}{2}$'	....
BALLOON	1839	Devine Burts	do	204	160' x 18' x 7 $\frac{1}{2}$ '	James
NORTH AMERICA	1839	do	do	494	230' x 26' x 9'	James
SOUTH AMERICA	1840	do	do	638	260' x 26' x 9 $\frac{1}{2}$'	....
TROY	1841	Wm. Capes	Brooklyn	721	294' x 61'	West
EMPIRE	1843	Wm. H. Brown	New York	936	307' x 30' x 9'	W. A.
NIAGARA	1844	George Collyer	do	688	265' x 28 $\frac{1}{2}$ ' x 9 $\frac{1}{2}$ '	Hogg
IRON WITCH	1844	Hogg & Delamater	do	225'	27' x 13'	....
RIP VAN WINKLE	1845	George Collyer	do	534	212' x 25' x 8'	W. A.
HENDRIK HUDSON	1845	do	do	1,170	320' x 35' x 9 $\frac{1}{2}$ '	Allaire
OREGON	1845	Smith & Dimon	do	1,050	320' x 35' x 10'	SGHm
THOMAS POWELL	1846	Lawrence & Sneden	do	585	231' x 28' x 9'	T. F.
ISAAC NEWTON	1846	William Brown	do	1,332	338' x 40' x 10 $\frac{3}{4}$ '	Allaire
ALIDA	1847	do	do	610	265' x 30' x 10'	Henry
ARMENIA	1847	Thomas Collyer	do	393	185' x 28' x 8'	....
NEW WORLD	1847	do	do	1,118	385' x 35' x 11'	T. F. S.
FRANCIS SKIDDY	1852	George Collyer	do	1,235	322' x 38' x 11 $\frac{1}{2}$ '	Jas. C.
DANIEL DREW	1860	Thomas Collyer	do	886	251' x 30' x 9 $\frac{1}{2}$ '	Neptu
JAMES W. BALDWIN	1861	M. S. Allison	Jersey City	710	242' x 34' x 9'	Fletch
MARY POWELL	1861	do	do	983	260' x 34 $\frac{1}{2}$ ' x 10 $\frac{1}{2}$'	....
THOMAS CORNELL	1863	E. S. Whitlock	Brooklyn	1,256	310' x 34'	....
BERKSHIRE	1863	Morton & Edmonds	Athens	253'	37' x 37' x 10'	James
ST. JOHN	1863	John Englis	Brooklyn	2,645	420' x 51' x 10'	T. F. S.
CHAUNCEY VIBRARD	1864	Lawrence & Sneden	do	1,158	281' x 33' x 9'	Fletch
DEAN RICHMOND	1864	John Englis	Greenpoint	2,525	348' x 46' x 10'	James
NUHPA	1865	J. S. Baldwin	New Baltimore	1,232	255' x 37' x 10'	Fletch
DREW	1866	John Englis	Greenpoint	2,902	366' x 47' x 10'	Allaire
CITY OF TROY	1876	do	do	1,527	300' x 36' x 10'	Quint
SARATOGA	1877	do	do	1,438	300' x 35' x 10'	T. F. S.
CITY OF CATSKILL	1880	Van Loan & Magee	Athens	....	250' x 35' x 10'	W. & A.
ALBANY	1880	Harlan & Hollingsworth Co.	Wilmington, Del.	1,415	295' x 40' x 11 $\frac{1}{2}$'	....
KATIERSKILL	1882	Van Loan & Magee	Athens	1,361	281' x 38' x 10'	Harlan
CITY OF KINGSTON	1884	Harlan & Hollingsworth Co.	Wilmington, Del.	1,117	250' x 33 $\frac{1}{2}$ ' x 12 $\frac{1}{2}$ '	Harlan
NEWBURGH	1886	Neale & Levy	Philadelphia	1,033	210' x 32' x 12 $\frac{1}{2}$ '	Neale
HOMER RAMSDELL	1887	T. S. Marvel & Co.	Newburgh	1,181	212' x 32 $\frac{1}{2}$ ' x 11'	Willia
NEW YORK	1887	Harlan & Hollingsworth Co.	Wilmington	1,552	311' x 40' x 12 $\frac{1}{2}$ '	W. & A.
ADIRONDACK	1896	John Englis	Greenpoint	3,644	410' x 50' x 12'	....
ONTARIO	1898	Marvel & Co.	Newburgh	1,213	250' x 35' x 10'	....
C. W. MORSE	1904	Harlan & Hollingsworth Co.	Wilmington, Del.	4,307	427' x 50 $\frac{1}{2}$ ' x 11'	....
HENDRICK HUDSON	1906	Marvel & Co.	Newburgh	2,847	390' x 45' x 13 $\frac{1}{2}$'	....
PRINCETON	1907	N. Y. Shipbuilding Co.	Camden, N. J.	4,500	440' x 56' x 14.6'	....
KNICKERBOCKER	1907	Marvel & Co.	Newburgh	2,000	330' x 42' x 13.7'	....
ROBERT FULTON	1909	Marvel & Co.	Newburgh	3,000	415' x 50 $\frac{1}{2}$ ' x 14'	....

1807-1907.

Compiled and Arranged by S. W. Stanton.

NAME BUILT BY	SIZE INCHES	ENGINE DIAM. STROKE FEET	ROUTE	REMARKS
Watt.....	24	4	N. Y. and Albany	Lengthened 1808 and name changed to NORTH RIVER.
ulton's Works	33	4½	do	Broken up.
do	32	4	do	Struck a rock and sunk near Albany.
Queen.....			do	Had mate in PERSEVERANCE, both broken up.
lton's Works	20	3½	N. Y. and Newburgh	Broken up.
do			N. Y. and Albany	Broken up about 1830.
Allaire.....	40	5	do	Built for N. Y. and New Brunswick route. Broken up.
Allaire.....	44	5	do	Placed on L. I. Sound 1828. Boston & Portland route 1-52.
Allaire.....	16 & 30	4	do	N. Y. & New Haven route; afterwards towboat on Hudson.
Allaire.....	16 & 30	4	do	Stake boat on North River until 1895; broken up.
ens	55	10	do	Altered into towboat named INDIANA; broken up.
ens	44	10	do	Dismantled and engine taken to Lake Erie.
ens	65	9	do	Altered 1852 and named ONTARIO; broken up 1894.
ens	44	8	do	Altered into towboat; broken up.
t Foundry			do	Altered into towboat; broken up.
o	66	10	do	Altered into towboat; broken up.
ron Works	30	6	do	Lengthened 1839 to 259 feet; broken up.
t Foundry	44	10	N. Y. and Troy	Two beam engines; sunk by ice 1839.
o	42	10	do	Altered into towboat; sunk 1845.
			N. Y. and Albany	Twice enlarged; broken up.
			do	Broken up.
			N. Y. and Albany	Lengthened to 220 feet; 2 engines; 12 boilers; 4 stacks.
			do	Two engines; 4 smokestacks; engines placed in TROY.
			N. Y. and Albany	Mate to ERIE; broken up.
			do	Altered into towboat named HUDSON; broken up.
			N. Y. and Albany	Broken up; engine placed in CHARLOTTE VANDERBILT.
			do	Went to Delaware River; broken up.
			N. Y. and Albany	Lost, April 7, 1845; over 100 persons perished.
			do	Broken up.
			N. Y. and Albany	Altered into towboat; condemned 1875.
			do	Broken up on Delaware River.
			N. Y. and Albany	Broken up at New Orleans.
			do	Broken up; engine placed in BERKSHIRE.
			N. Y. and Albany	Engines from ERIE; placed horizontally; broken up.
			do	In collision, July 16, 1853; broken up.
			N. Y. and Albany	Altered into towboat; broken up 1898.
			do	Name changed to ERIE; made barge; broken up.
			N. Y. and Albany	Wrecked at Albany, April 16, 1872.
			do	Broken up.
			N. Y. and Albany	Lost by collision with steamer City of Boston, 1864.
			do	Broken up.
			N. Y. and Albany	Lengthened, 1854, to 405 feet; burned Dec. 5, 1863.
			do	Altered into towboat; broken up.
			N. Y. and Albany	Went to Potomac River, 1883; burned Jan. 5, 1886.
			do	Engine put in ST. JOHN; broken up.
			N. Y. and Albany	Wrecked, Nov. 5, 1864; engine in DEAN RICHMOND.
			do	Burned August 29, 1885.
			N. Y. and Rondout	Lengthened to 273 feet; now named CENTRAL-HUDSON.
			do	Lengthened to 300 feet; running 1907.
			N. Y. and Rondout	Wrecked March 27, 1882.
			do	Burned June 5, 1864; 40 persons lost.
			N. Y. and Albany	Burned Jan. 24, 1885.
			do	Broken up, 1902.
			N. Y. and Albany	Running to Troy, 1907.
			N. Y. and Hudson	Propeller; name changed to METROPOLITAN; broken up.
			do	Broken up, 1904.
			N. Y. and Albany	Burned, April 5, 1907.
			N. Y. and Albany	Sunk by collision, Oct. 13, 1906; raised and rebuilt, 1907.
			N. Y. and Albany	Burned Feb., 1883.
			N. Y. and Catskill	Lengthened, 1893, to 325 feet; running 1907.
			N. Y. and Albany	Running 1907.
			N. Y. and Rondout	Propeller; sold, 1889, for service on Pacific, sunk 1899.
			N. Y. and Newburgh	Propeller; running 1907.
			do	Propeller; lengthened 1885 to 237 feet; running 1907.
			N. Y. and Albany	Lengthened to 350 feet; running 1907.
			do	Running 1907.
			do	do
			do	do
			do	Ready for service 1908.
			do	do
			do	Ready for service 1909.
			do	do

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